

# Unleashing open innovation in the public sector: a bibliometric and interpretive literature review

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## Abstract

**Purpose** – Institutional, economic, social and technological advancements enable openness to cope with wicked public management issues. Although open innovation (OI) is becoming a new normality for public sector entities, scholarly knowledge on this topic is not fully systematized. The article fills this gap, providing a thick and integrative account of OI to inspire public management decisions.

**Design/methodology/approach** – Following the SPAR-4-SLR protocol, a domain-based literature review has been accomplished. Consistently with the study purpose, a hybrid methodology has been designed. Bibliographic coupling permitted us to discover the research streams populating the scientific debate. The core arguments addressed within and across the streams were reported through an interpretive approach.

**Findings** – Starting from an intellectual core of 94 contributions, 5 research streams were spotted. OI in the public sector unfolds through an evolutionary path. Public sector entities conventionally acted as “senior partners” of privately-owned companies, providing funding (yellow cluster) and data (purple cluster) to nurture OI. An advanced perspective envisages OI as a public management model purposefully enacted by public sector entities to co-create value with relevant stakeholders (red cluster). Fitting architectures (green cluster) and mechanisms (blue cluster) should be arranged to release the potential of OI in the public sector.

**Research limitations/implications** – The role of public sector entities in enacting OI should be revised embracing a value co-creation perspective. Tailored organizational interventions and management decisions are required to make OI a reliable and dependable public value generation model.

**Originality/value** – The article originally systematizes the scholarly knowledge about OI, presenting it as a new normality for public value generation.

**Keywords** Open innovation, Public management, Collaboration, Public value, Value co-creation

**Paper type** Literature review

## 1. Introduction

Increasing turbulence and complexity of the environment reconfigure the logic that inspires the functioning of public sector entities (*e.g.* Barahona and Elizondo, 2014; Demircioglu and Audretsch, 2020), calling for management decisions aimed at organizational flexibility and adaptiveness (Cunningham and Kempling, 2009; Isaac-Henry and Painter, 1991). This happens amidst multiple challenges, which undermine the public sector entities’ ability to meet the evolving needs of the community. Financial constraints make it difficult to achieve a compromise between austerity measures and the delivery of high-quality services

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(Felício *et al.*, 2021). Technological transformations alter value creation processes and revisit conventional management practices (Erakovic and Wilson, 2006). Institutional transitions imposed by the managerialization of the public sector dictate a rethinking of the assumptions laying behind management decisions, propelling proactiveness and resilience in steering public sector entities (Common, 1998).

The shift towards value co-creation has been envisaged as the leading way to cope with such challenges (Palumbo and Fakhar Manesh, 2021). This is especially true where innovation is concerned (Alves, 2013). Innovation broadly encompasses management efforts and decisions directed at introducing new solutions to enhance operational efficiency, foster organizational adaptiveness and advance public services' quality (Queyroi *et al.*, 2022). Collaborative practices empower public sector entities to escape environmental unpredictability (Colovic *et al.*, 2022), revitalizing them with the energy and resources of external stakeholders (Ansell and Torfing, 2021). Therefore, innovation in the public sector is reconceptualized according to an open innovation (OI) perspective, which rejects the conventional one-sided and closed view and relies on "... a process of collaboration and cocreation between stakeholders in order to address societal challenges" (Bekkers and Tummers, 2018, p. 211).

As argued by Chesbrough and Bogers (2014, p. 17), OI is "... a distributed innovation process that involves purposively managed knowledge flows across the organizational boundary". Three attributes characterize OI (Kankanhalli *et al.*, 2017). First, it originates from a deliberate strategic orientation which sticks to a collaborative blueprint (Feller *et al.*, 2011). Second, it is based on continuous knowledge inflows and outflows, boosting creativity through mutual fertilization (Smith *et al.*, 2019). Third, it is based on distributed learning, which is quintessential to tackle the transversal challenges met by public sector entities (Lee *et al.*, 2012). OI has been argued to fit the public sector, which broadly involves "... all organizations owned by governments, be they national, regional, or local, including state supported institutions" committed to the generation of value for the community (Blais *et al.*, 1990, p. 382). The systemic nature of the public sector facilitates knowledge inflows and outflows across organizational boundaries to nurture public value generation (Radnor *et al.*, 2014). Besides, the publicness of public management issues (Pesh, 2008) legitimizes the involvement of multiple stakeholders in polymorphic endeavours intended to advance the efforts directed at public value generation (De Vries *et al.*, 2018a). Finally, yet importantly, the transition towards smart governance (Ferraris *et al.*, 2018) and the emphasis attached to co-production (Palumbo, 2016) entail a reconfiguration of public value generation models, fostering the adoption of OI practices (Hurmelinna-Laukkanen *et al.*, 2021).

Whilst scholars emphasized the need to "... draw more extensively on open innovation" (De Vries *et al.*, 2018b, p. 159) to deal with the fast-moving scenario experienced by public sector entities (Criado and Guevara-Gómez, 2021), evidence of the requisites (Hameduddin *et al.*, 2020), attributes (Heimstädt and Reischauer, 2019) and implications (Paskaleva and Cooper, 2018) of OI in the public sector is inconsistent. Previous studies argued that research and practice about OI in the public sector are misaligned, due to the heterogeneity of perspectives adopted by scholars and practitioners (Pedersen, 2020). This calls for a systematization of the scientific literature, unveiling the *how* and *why* of OI in the public sector. Earlier reviews on this topic have addressed the determinants of OI, the interventions to support openness and the barriers preventing the creation of a collaborative space in the public sector (see, *inter alia*: Lopes and Farias, 2022; Mu and Wang, 2022; De Coninck *et al.*, 2021). Furthermore, they have been focused either on particular geographical contexts or on specific organizational purposes (*e.g.* Haley, 2016). However, inadequate efforts have been made to map the state of the scholarly debate contextualizing OI in the public sector. This is a major knowledge gap, which prevents us from fully acknowledging the contribution of OI to public value generation (Fuglsang and Hansen, 2022). To fill this gap, the article advances a hybrid domain-based literature review. A bibliographic analysis enabled us to identify the

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research streams articulating the extant scholarly debate. Relying on authors' interaction and interpretation to delve into research streams and establish bridges across them, an interpretive approach was embraced to extract evidence of what makes OI viable in the public sector. Consistently with recent trends inspiring the scholarly debate in the field of management decisions (Caputo *et al.*, 2022), our research addresses the following questions:

RQ1. What is the role of public sector entities in enacting OI?

RQ2. What is the scope of OI in the public sector?

RQ3. What are the conditions for establishing OI in the public sector?

The article is organized as follows. Section 2 presents the methodology and describes the study protocol implemented to collect and systematize relevant contributions. Section 3 delivers an overview of the findings, presenting the research streams generated by bibliographic coupling. Section 4 critically discusses the study results, highlighting the implications of our literature review and envisioning avenues for further development. Section 5 concludes the paper, stressing its twofold contribution to theory and practice.

## 2. Methodology

Drawing on the taxonomy of literature reviews proposed by Palmatier *et al.* (2017), a domain-based approach was taken to conduct this study. OI was framed as the main domain of this literature review (Fernandes *et al.*, 2019). The public sector was identified as the field within which it was contextualized, acknowledging the salience of OI for public value generation (Mu and Wang, 2022). Hence, OI in the public sector was addressed as a substantive study domain which, as argued by Kankanhalli *et al.* (2017), shows distinguishing features as compared with OI in the private sector, such as: (1) its focus on public value generation; (2) its target on improving public service performance; and (3) the involvement of citizens, non-profit entities and higher education institutions alongside privately-owned organizations in the pursuit of innovation.

Echoing the study design of previous studies adopting the same methodological outline in different domains (e.g. Casprini *et al.*, 2020 and Dabic *et al.*, 2020), we crafted a hybrid literature review, which consisted of a bibliographic analysis intended to cluster reviewed items into homogeneous research streams and an interpretive theme-based review targeted to deliver a thorough and integrative account of research streams (Paul and Criado, 2020). To enhance the study replicability and reliability, the Scientific Procedures and Rationales for Systematic Literature Reviews (SPAR-4-SLR) proposed by Paul *et al.* (2021) were followed. As compared with other protocols for conducting systematic literature reviews, such as the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), SPAR-4-SLR was specifically designed for social sciences (Tsiotsou and Boukis, 2022). It disclosed several advantages, including a dependable assessment of the literature being investigated and an increased transparency, replicability and robustness of items' coding, assessment and analysis (Kumar *et al.*, 2022).

This protocol unfolds through three steps, each of which further consists of two sub-steps. During the *assembling* stage (Step 1) an effort is made to delimit the study domain and identify the data sources for items' collection. In the *arranging* stage (Step 2) the rules to analyse collected items are defined and the records that are not consistent with the inclusion criteria are discarded. Finally, in the *assessing* stage (Step 3) included items are carefully analysed and systematized, inspiring the report of the findings. A detailed account of the research protocol is presented below.

### 2.1 Assemble

The *assembling* stage started with clearly defining the boundaries of the study domain and involved the selection of the most fitting sources to collect relevant scientific contributions.

Since our main target was OI, we decided to focus on it as the primary component of our search string. We did not take into consideration synonyms of OI, such as distributed innovation or networked innovation (Spender *et al.*, 2017), to keep the spotlight exclusively on OI. Moreover, we did not use concepts which embrace an open perspective, but are not immediately targeted at innovation, such as co-production, which focuses on the design and delivery of public services (Palumbo, 2016), open government, which refers to the informational and interactive openness of public sector entities (Meijer *et al.*, 2012) and crowdsourcing, which entails citizens' participation in initiatives directed "... to generate better public services with lower costs" (Liu, 2017, p. 656). The search string comprised a secondary component, which was intended to contextualize our literature review to the public realm. Alongside referring to public sector entities and public administration, we included any potential variations which accounted for the complexity of the public sphere, such as public services and public management. The secondary keywords were reciprocally connected with the Boolean operator "OR", whilst the primary and the secondary keywords were associated by the Boolean operator "AND".

Different data sources are available to accomplish literature reviews. Consistently with the approach taken in previous studies consisting of a bibliographic analysis and an integrative systematization of retrieved items (Balzano, 2022), we queried two major sources (Archambault *et al.*, 2009; Mongeon and Paul-Hus, 2016): Clarivate Analytics' Web of Science (WoS™) and Elsevier's Scopus®. We did not set any temporal limitations in our search strategy to be as much comprehensive as possible in our data collection. We contemplated different types of scientific contributions, such as article published in peer-reviewed journals, conference proceedings and book chapters. The inclusion of conference proceedings and book chapters permitted us to consider emergent scholarly contributions presented at academic conferences or hosted in edited books, but which were not already published in scientific journals at the time of this literature review. We excluded notes, erratum and similar records which did not significantly advance the state of knowledge in the study domain. We set a strict language limitation, admitting in the analysis only items published in English. The search was targeted to the title, abstract and keywords in Scopus® and to topic in WoS™. The asterisk (\*) was used to catch any variations of the terms included in the query, which is reported below:

("open innovat\*") AND ("Public Adm\*" OR "Public Sect\*" OR "Public serv\*" OR "Public man\*" OR "Public Ent\*" OR "\*government" OR "public gov\*")

The search string was run on January, 10th 2022 and delivered 608 records on Scopus® and 395 records on WoS™. The items delivered by the two sources were carefully compared. The items collected from WoS™ were also indexed in Scopus®, which rendered a larger number of items. Hence, we decided to use Scopus® due to its larger coverage (Vera-Baceta *et al.*, 2019). Most items involved in the analysis consisted of articles published in peer reviewed journals (52.4%), followed by conference proceedings (33.6%) and books' chapters (9.4%).

## 2.2 Arrange

The retrieved items were collected in an electronic worksheet. Codes based on authors' name, article's type (*e.g.* original article, review, conference paper and book chapter), title, source, publisher and year of publication were used to accomplish a preliminary screening of the records. This preliminary analysis led us to remove 16 duplicates from the original database. Furthermore, we decided to retract from the dataset items which were issued by publishers considered to be predatory or facing ethical problems in publishing to ensure the dependability of our literature review. Altogether, 77 contributions were discarded. Next, the authors met to define exclusion and inclusion criteria. Drawing on extant literature reviews (Palumbo *et al.*, 2022), three exclusion criteria were agreed. Items which did not

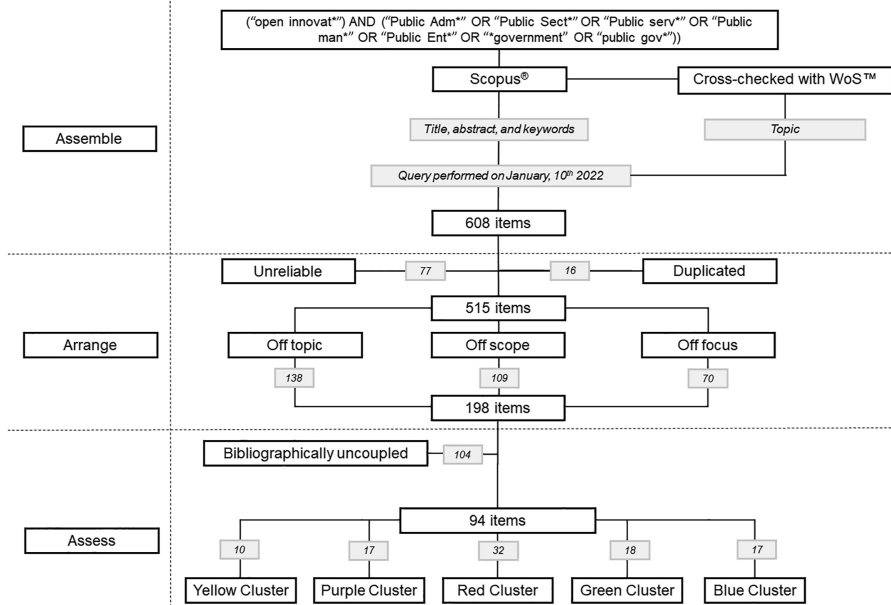
address issues and challenges related to the application of OI in the public sector were rejected as *off topic*. Besides, records which did not deliver any relevant insights into the role of public sector entities in enacting and nurturing a public value generation model based on OI were retracted as *off scope*. Finally, contributions which did not deliver compelling evidence on the importance of OI for augmenting the value generation capability of public sector entities were removed as *off focus*. The authors independently screened the items to purify the dataset. Once individual analysis was completed, the authors had a meeting which was intended to overcome inconsistencies in the inclusion and exclusion of analysed items. The authors did not agree on the exclusion of 78 items. A debate was launched to set disagreements. The majority rule was adopted, *i.e.* contested items were removed if 2 in 3 authors agreed on their exclusion. As a result of this analysis, 317 items were retracted: more specifically, 138 were *off topic*, 109 were *off scope*, and 70 were *off focus*. Hence, 198 records were admitted to the final step of this literature review.

### 2.3 Assess

The records which passed the arranging stage were duly examined to identify the main research streams and point out the key themes addressed within and across them. Following the approach taken in previous reviews aimed at investigating the scope of OI (*e.g.* Kovács *et al.*, 2015), a bibliometric analysis was accomplished, which enabled us to map the intellectual structure of retrieved literature. We used bibliographic coupling as the aggregation mechanism and the visualization of similarity technique to systematize articles into clusters depicting homogeneous research streams (van Eck and Waltman, 2010). This approach assumes that articles citing one or more common references are likely to pertain the same research stream (Boyack and Klavans, 2010). Bibliographic coupling was used because it permitted us “... to construct structural images” of the research streams, relying on the shared research interest of coupled items assessed by the similarity of their reference lists (Zupic and Čater, 2015, p. 430). VOSviewer (vers. 1.6.10) was used to run the analysis.

The output of this methodological approach is displayed in a two-dimensional map, which exploits the outcome of the aggregation analysis to locate items based on their similarity measures. Relatedness is denoted by articles' spatial proximity. The threshold for running the analysis was fixed at a minimum of 5 common references to enhance the internal coherence of research streams and the total citation link strength was set at 10 to ensure the thickness of the clusters (Waltman and van Eck, 2012). In line with previous literature reviews (Balzano, 2022), we allowed a minimum cluster size of 8 items, and we maintained at 1 the resolution parameter to get large enough clusters embedding consistent streams of scientific literature (van Eck and Waltman, 2017). As a result of this routine, 94 items were found to be highly coupled. The full list of selected items is available in Table A1, which is attached to the article and provides descriptive information on the knowledge core of this literature review. The records were clustered in 5 groups, representing different shades of the scientific debate on OI in the public sector. Figure 1 displays a flow diagram depicting the steps which were taken to obtain, analyse and select relevant items.

Drawing on Tranfield *et al.* (2003), a non-standardized reporting approach was taken to systematize the contributions, which enabled us to achieve an improved explanatory power. More specifically, an interpretive approach was used. The articles were manually coded by the authors, who independently assessed the key themes addressed in the research streams (Bryant and Charmaz, 2010). On the one hand, open coding was used to spot the conceptual and empirical insights delivered by the literature. On the other hand, axial coding was implemented to highlight mutual links across the contributions. At the end of individual analysis, the authors met to discuss inconsistencies and work out a dependable and harmonious account of the research streams. Once all disagreements were set, the authors



**Figure 1.**  
A graphical representation of items' collection and analysis

**Source(s):** Authors' own creation

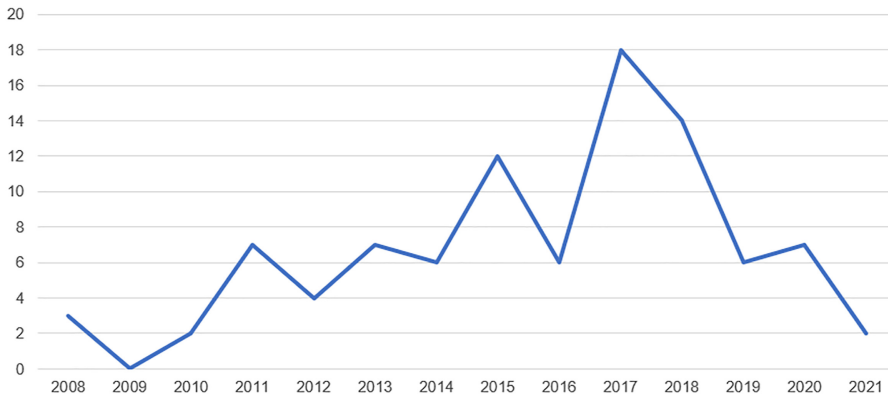
arranged a final report summarizing the main results of the literature review, which inspired the findings of this article.

### 3. Findings

#### 3.1 An overview of reviewed contributions

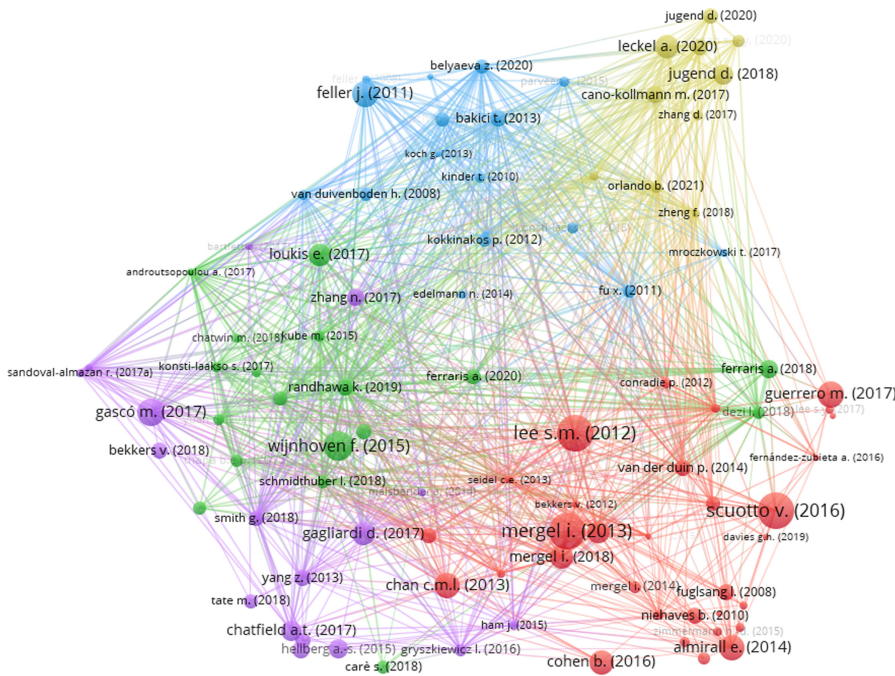
Most items included in this literature review consisted of articles published in peer-reviewed journals (75.5%), followed by conference proceedings (20.2%) and book chapters (4.3%). About 60 different sources covering disparate scientific fields – including business, management and accounting, computer science, engineering, decision sciences and economics – were taken into consideration. As depicted in Figure 2, publication years ranged from 2008 to 2021. More than 2 in 3 contributions were published from 2015 onwards (69.1%), witnessing the salience of the study domain. On average, the records included in this literature review were cited 29 times ( $\sigma = 33.4$ ) at the time of this study, ranging from a minimum of 4 citations to a maximum of 181 citations.

Figure 3 graphically displays the clusters obtained from bibliographic coupling. As synthesized in Table 1, the Yellow cluster consists of 10 items published between 2017 and 2021: it articulates the senior partnership role of public sector entities in sustaining OI via financial and relational support. The Purple cluster includes 17 records published between 2013 and 2018, presenting public sector entities as enablers of OI through open public data. The Red cluster encompasses 32 articles published between 2008 and 2019: it frames a public value creation view of OI. The Green cluster hosts 18 items published between 2015 and 2021, shedding light on the architectures required to put OI at the service of public value creation. Lastly, the Blue cluster accounts for 17 items published between 2008 and 2020: it envisions



Source(s): Authors' own creation

**Figure 2.**  
The items' distribution per publication year



**Yellow cluster:** Aiding OI via financial and relational support

**Purple cluster:** Nurturing OI through public open data

**Red cluster:** Creating public value through OI

**Green cluster:** Preparing the ground for OI

**Blue cluster:** Oiling the mechanisms for OI

Source(s): Authors' own creation

**Figure 3.**  
The output of bibliographic coupling

Cluster	Label	No of items	Range of publication year	Main theme(s) addressed	Key references
Yellow cluster	Aiding OI via financial and relational support	10	2017/2021	Public sector entities initiate OI ecosystems encouraging stakeholders to enter collaborative innovation efforts through financial and relational aids. The relationship between financial aids and stakeholders' involvement in OI initiatives follows an inverted U shape. A combination of financial and relational aids is required to foster the establishment of vivid OI ecosystems	<a href="#">Ahn et al. (2020)</a> , <a href="#">Jugend et al. (2020)</a> , <a href="#">Leckel et al. (2020)</a>
Purple cluster	Nurturing OI through public open data	17	2013/2018	Alongside delivering financial and relational support, public sector entities can support OI through public open data. Limitations preventing the stakeholders' access to public open data should be addressed. On the one hand, adequate infrastructures should be implemented to ensure the fair and timely access to open public data. On the other hand, boundary spanning and interorganizational relationships should be exploited to facilitate the alignment of perspectives between public sector entities and relevant stakeholders	<a href="#">Gagliardi et al. (2017)</a> , <a href="#">Gascó (2017)</a> , <a href="#">Tate et al. (2018)</a>
Red cluster	Creating public value through OI	32	2008/2019	OI is conceived of as an innovative public management model to engage stakeholders in public value generation. Embracing a collaborative economy perspective, OI involves the implementation of public-private partnerships (PPPs), leveraging the knowledge and skills of privately-owned companies to address public management challenges. Adopting a public service perspective, OI implies the shift towards a public private people partnership (PPPP) approach, which emphasizes people centeredness and relies on citizens' empowerment for the purpose of public value generation	<a href="#">Cohen et al. (2016)</a> , <a href="#">Mergel (2015)</a> , <a href="#">Molinari (2011)</a>
Green cluster	Preparing the ground for OI	18	2015/2021	Inconsistent rules and ambiguous strategies prevent the success of collaborative innovation in the public sector. To overcome such shortcomings, public sector entities should prepare the ground for OI, dealing with the "hard" and "soft" side of collaborative innovation. A reliable infrastructure should be arranged to facilitate inflows and outflows of knowledge. Moreover, attention should be paid to the incentives fostering stakeholders' participation to OI	<a href="#">Ferraris et al. (2020)</a> , <a href="#">Wijnhoven et al. (2015)</a> , <a href="#">Yuan and Gasco-Hernandez (2021)</a>

**Table 1.**  
A descriptive overview  
of the clusters retrieved  
from bibliographic  
coupling

(continued)



Cluster	Label	No of items	Range of publication year	Main theme(s) addressed	Key references
Blue cluster	Oiling the mechanisms for OI	17	2008/2020	OI requires the design of context-specific interventions, which should fit with the complexity of the institutional field and with the political, social, and economic challenges faced by public sector entities. Collaborative innovation relies on four principles: accessibility, transparency, participation, and empowerment	Koch <i>et al.</i> (2011), Lundgren and Westlund (2017), Mroczkowski and Miller (2017)

Source(s): Authors' own creation

the mechanisms for exploiting OI for viable public value generation. An interpretive account of the 5 research streams follows.

### 3.2 Yellow cluster: aiding OI via financial and relational support

Public sector entities are in a critical position to promote the establishment of OI ecosystems, putting multiple stakeholders' ingenuity and creativity at the service of economic and social development (Gershman *et al.*, 2019). However, public sector entities may lack resources and capabilities to manage complex inter-organizational relationships; furthermore, they may be unprepared to abandon conventional innovation practices which stick to a closed perspective. These limitations induce public sector entities to indirectly participate in OI ecosystems. Such indirect participation takes different shapes, ranging from supporting private companies with financial aids (Leckel *et al.*, 2020) to the creation of intermediary organizations to foster inbound and outbound innovation at the crossroad of the public and the private sectors (Gershman *et al.*, 2019).

Jugend *et al.* (2020, p. 11) identified four dimensions of public support for innovation, *i.e.*: "... (1) financial support for R&D activities; (2) development through innovation; (3) support for sectorial programs; and (4) university-industry-government collaboration (triple helix)". Elaborating on this classification, public sector entities support OI using two leverages: financial aids and relational aids. In most cases, they deliver financial assistance to stimulate stakeholders' commitment to OI (Cheah and Ho, 2020). The availability of public funding reduces perceived risks, thus stimulating the willingness of private companies to participate in boundaryless research and development endeavours (Orlando *et al.*, 2021). Besides, financial aids provide incentives to the development of knowledge, skills and capabilities that are conducive to OI (Zheng *et al.*, 2018). These interventions are especially effective when less innovative companies benefit from public support, which is intended at nurturing their research and development potential (Cano-Kollmann *et al.*, 2017).

For what concerns relational aids, public sector entities promote and sustain inter-organizational relationships involving research institutions, private companies and the community in innovation practices. Non-monetary support focused on facilitating networking has been argued to be more effective in enabling OI when complex innovation initiatives are concerned (Jugend *et al.*, 2018). Networking paves the way for a multiple helix approach, which enables the co-creation of shared cultural artifacts to advance collaborative innovation and curb appropriability hazards, thus encouraging joint efforts aimed at OI (Zhang *et al.*, 2017a). Although scholars agree in claiming the importance of public support for OI, they are not consistent in appreciating its implications on the recipients' propensity to implement outbound research initiatives. More specifically, previous studies emphasized that

companies benefitting from large amount of support are less willing to participate in collaborative innovation than their counterparts receiving modest support (Ahn *et al.*, 2020). This casts a shade on the effectiveness of public aids to enact OI ecosystems and highlights the need for balancing financial aid with relational aid.

### 3.3 Purple cluster: nurturing OI through public open data

Alongside delivering financial and relational aids, public sector entities nurture OI by enhancing the stakeholders' access to data concerning public management issues and activities, which can be exploited for innovation purposes (Malsbender *et al.*, 2014). Nevertheless, enabling open data access in a perspective of information intensity is not enough for stimulating OI (Chatfield and Reddick, 2017). Open government data should be purposefully classified, elaborated and managed, advancing their meaningfulness for stakeholders interested in the implementation of inbound and outbound innovation (Gagliardi *et al.*, 2017). This is consistent with embracing a capacity building perspective, empowering stakeholders to participate in addressing public management challenges through the access to timely and relevant open public data (Sandoval-Almazan *et al.*, 2017). Before building infrastructures hosting public open data, it is necessary that public sector entities establish loyal and trusted relationships with stakeholders, stimulating their willingness to use public open data to partake in public value generation (Sandoval-Almazan and Valle-Cruz, 2017). This is consistent with previous research arguing that the arrangement of a shared OI perspective with relevant interlocutors "... is considered more important than obtaining specific innovation results" (Gascó, 2017, p. 90).

Despite the advantages triggered by implementing a data-driven OI framework, it heralds shortcomings which endanger the collective commitment towards exploiting public open data for innovation purposes (Ham *et al.*, 2015). On the one hand, lack of adequate infrastructures, competencies and expertise to ensure the fair access to open data compromises the success of data-driven OI (Hellberg and Hedström, 2015). On the other hand, limited availability of boundary spanners and cross-organizational linkages promoting an alignment between the perspectives held by public sector entities and relevant stakeholders constrains the latter's willingness to use public open data (Yang and Kankanhalli, 2013), with the emergence of barriers to data-driven OI (Tate *et al.*, 2018).

Tailored interventions are required to address these issues. Literature identifies three main areas of intervention. Firstly, a favourable atmosphere for OI should be established at the macro level, enacting a compelling institutional framework which solicits the adoption of an open perspective in managing public open data (Kassen, 2017). Such institutional framework should be embodied in a hybrid (physical and virtual) collaborative environment, where the principles of transparency and openness are stressed, exchanges between public sector entities and stakeholders are nurtured, and a collective enthusiasm towards OI is propelled (Gryszkiewicz *et al.*, 2016). Secondly, public sector entities should empower their stakeholders (including citizens), enabling them to maximize the advantage they can get from open data and putting social capital at the service of public value generation (Bartlett, 2017). Therefore, public sector entities should implement a thick web of connections at the meso level (Bekkers and Tummers, 2018), supporting stakeholders in handling and exploiting public open data (Susha *et al.*, 2015). Lastly, attention should be paid to the "hard" side – *e.g.* infrastructures and platforms implemented to ensure the reliable access to public open data (Smith and Sandberg, 2018) – and to its "soft" side – *e.g.* informal support to organizational development initiatives (Zhang *et al.*, 2017b) – of data-driven OI, overcoming resistances to the use of public open data dictated by the inability to accommodate the stakeholders' motivations, approaches and objectives in partaking to OI.

### 3.4 Red cluster: creating public value through OI

Financial and relational aids and access to public open data are generally implemented as preliminary steps of a fully-fledged OI strategy (Chan, 2013). It is targeted at filling the emptiness of e-government approaches (Assar *et al.*, 2011), engaging stakeholders in developing innovative public services (Bekkers, 2012) and in stimulating local development (Guerrero and Urbano, 2017). For this to happen, tailored initiatives intended to empower stakeholders are necessitated (Almirall *et al.*, 2014), arousing their desire and willingness to participate in a collective endeavour aimed at public value co-creation (Conradie *et al.*, 2012). Stakeholders' engagement may take different forms, according to the specific aims of public sector entities (Fernández-Zubieta *et al.*, 2016) and the characteristics of the institutional field where OI is implemented (Davies *et al.*, 2019). Outside-in models overcome the scarcity of knowledge and resources available to the public sector (Heimstädt and Reischauer, 2019) by leveraging partners' expertise and assets (Niehaves, 2010). Alternatively, inside-out models make the public sector entities' assets available to their stakeholders (Lee *et al.*, 2016), paving the way for public value co-generation (Lee *et al.*, 2012).

Different interlocutors can be involved in OI, which enacts a vivid and viable innovation ecosystem (Fu and Mu, 2014). In most cases, public sector entities embrace a collaborative economy perspective (Cohen *et al.*, 2016), involving private companies in public-private partnerships (PPPs) to accomplish boundaryless innovation (Scuotto *et al.*, 2016). Mutual exchanges between public sector entities and private partners create opportunities for cross-fertilization of knowledge (Hennala *et al.*, 2011), which improves the distributed ability to anticipate environmental trends (Van der Duin *et al.*, 2014) and generate new ideas (Venturini and Verbanò, 2017). This has a twofold contribution on public value generation (Katsonis and Botros, 2015). On the one hand, it expedites the public sector entities' ability to avoid disruption in the delivery of public services (Mergel *et al.*, 2014) and to tackle the challenges that compromise public value creation (Martins *et al.*, 2015). On the other hand, it nourishes the collective innovation potential, catalyzing the establishment of a co-creating effort for continuous public value generation through the involvement of talents from the private sector (Lee *et al.*, 2017).

Beyond involving private companies in OI, public sector entities may adhere to a public private people partnership (PPPP) approach (Katsonis and Botros, 2015), empowering citizens to actively partake in the generation of public value (Molinari, 2011). Drawing on extant literature, citizens may participate in different stages of the public value creation process, based on their level of knowledge and experience (Seidel *et al.*, 2013). They can contribute to the design of platforms hosting the exchanges between public sector entities and the community (Charalabidis *et al.*, 2011). Besides, they can act as collectors and/or classifiers of data, extracting new insights and ideas from them to push forward public governance and management (Mergel, 2018). Finally, they can be involved in the co-production of public services, being engaged in initiatives which are intended to enhance the individual and collective well-being (Mainka *et al.*, 2016).

Whilst literature emphasizes the importance of OI for the viability of public sector entities (Zimmermann and Pucihar, 2015), it is still not clear which kind of interventions are required to set the conditions for involving stakeholders in public value generation and fully capturing the benefits of OI (Fuglsang, 2008). Transparency and participation have been identified as the pillars on which OI strategies should be established (Mergel, 2015). They should be considered throughout the design and implementation of the OI strategy. This entails clarifying the rationale laying behind the adoption of OI, embedding openness in management practices, incentivizing stakeholders' participation in the design of collaborative architectures (Zheng and Hu, 2018) and continuously assessing the implications of OI on public value generation (Mergel and Desouza, 2013).

### 3.5 Green cluster: preparing the ground for OI

Various shortcomings prevent the implementation of OI in the public sector, which are inherited by the prejudice towards public value co-creation rooted in the conventional bureaucratic model (Dos Santos *et al.*, 2015). Institutional hurdles, such as inconsistent rules regulating stakeholders' participation in public service co-production and the absence of an integrated view inspiring partners' action and communication, slow down the design and the implementation of OI (Ferraris *et al.*, 2020). Moreover, the mismatch between the stakeholders' skills and expertise, the complexity of problems to be addressed, and the public sector entities' limited ability to stick to transparency have been claimed to produce disengagement (Chatwin and Arku, 2017), ushering stakeholders' unwillingness to partake in a boundaryless approach to public value co-creation (Thapa *et al.*, 2015).

Public sector entities should undertake tailored initiatives to cope with these problems and prepare the ground for OI (Randhawa *et al.*, 2019). Scholarly research highlighted that twofold interventions are needed, addressing the technological and the social sides of OI (Paskaleva and Cooper, 2018). From a technological point of view, a virtual terrain on which OI takes its roots should be prepared (Carè *et al.*, 2018). Technologies facilitate the alignment between the new forms of governance embraced by public sector entities and the evolving societal and cultural trends experienced by the community, creating opportunities for public value co-creation (Dezi *et al.*, 2018). Technologies should be put at the service of stakeholders' engagement, curbing the barriers that undermine their ability to contribute to public value generation through data provision and classification, idea generation, service co-production and outcome evaluation (Díaz-Díaz and Pérez-González, 2016). From a social point of view, the success of OI relies on three factors. Firstly, it requires a focus on partners' experiences, consistently with a co-producer-centred model of OI (Konsti-Laakso, 2017). Secondly, a rich network of social ties among partners should be arranged to facilitate knowledge inflows and outflows (Schmidhuber and Hilgers, 2018). Social ties should be imbued with mutual trust, which is a secret sauce in the recipe for OI in the public sector (Ferraris *et al.*, 2018). Thirdly, attention should be paid to the motivations triggering the stakeholders' participation to OI, which are affected by the scope of the project (Wijnhoven *et al.*, 2015), as well as by the monetary and non-monetary incentives used to foster stakeholders' involvement (Schmidhuber *et al.*, 2019).

A multi-level framework should be designed to match the technological and the social sides of OI, accounting for the stakeholders' contributions to public value generation (Kube *et al.*, 2015). It is articulated in a three-layered architecture, consisting of: (1) digital platforms allowing the integration of machine and human reasoning (Androusoπούλου *et al.*, 2017); (2) social media enabling stakeholders to share and report their ideas and perspectives (Loukis *et al.*, 2017); and (3) collective offline events, such as civic hackathons and living labs, which build a physical space devoted to public value co-creation and enrich the relationship between public sector entities and stakeholders (Yuan and Gasco-Hernandez, 2021).

### 3.6 Blue cluster: oiling the mechanisms for OI

Innovation in the public sector has been traditionally conceptualized sticking to a closed perspective, which overlooks the strengths of inter-organizational relationships (Kinder, 2010). This is consistent with the consolidated bureaucratic culture of the public sector, which represents a constraint for innovation and discourages collaborative processes aimed at value co-creation (Van Duivenboden and Thaens, 2008). To overcome such hurdles, the implementation of OI requires the design of context-specific interventions (Mroczkowski and Miller, 2017), which are tailored to the complexity of the external environment and to the political, social and economic challenges faced by public sector entities (Koch *et al.*, 2011).

OI models rely on four principles, which are constitutive elements of collaborative innovation (Lundgren and Westlund, 2017). Firstly, they should be accessible, enabling all

stakeholders to participate in value co-creation. Secondly, they should be transparent, ensuring equity and fairness. Thirdly, they should be participative, empowering stakeholders to fully express their potential for public value co-creation. Fourthly, they should adopt an ethics of sharing, promoting the continuous exchange of information and resources. These core attributes can be variously blended, producing a variety of OI approaches (Feller *et al.*, 2008). Among others, Feller *et al.* (2011) identified four different configurations of OI, which are characterized by: (1) the aggregation of service co-producers in an integrated ecosystem led by public sector entities and directed towards public value generation; (2) the establishment of a syndication of value co-creators, which is based on resource sharing and is coordinated by public sector entities; (3) the implementation of a consumption approach, according to which public sector entities act as regulators and delegate public value generation to stakeholders; and (4) the design of a co-creating system, entailing a partnership between public sector entities and private partners to advance the public value generation capability.

The feasibility of these models depends on a set of requirements, which oil the mechanisms of OI. Public sector entities should develop proper network management capabilities, aligning the stakeholders' needs and expectations and fostering their activation for the purpose of public value co-creation (Belyaeva *et al.*, 2020). Structural and cultural changes in the design of public sector entities are needed (Parveen *et al.*, 2015), with the introduction of boundary spanning units to hybridize traditional public management practices with insights and perspectives collected from other institutional fields (Fu and Xiong, 2011). Since resistances to change are likely to appear, OI intermediaries should be involved, delegating to them the responsibility for orchestrating the connections and exchanges across the stakeholders participating in public value co-creation (Bakici *et al.*, 2013). Ubiquitous digital infrastructures facilitate the transition towards OI (Edelmann *et al.*, 2014), augmenting the public sector entities' capability to establish positive connections with stakeholders, energizing and empowering them (Koch *et al.*, 2013). Structural changes should be accompanied by a transformation of human resource management practices. Public servants should be empowered and engaged in designing management solutions which are consistent with OI (Hameduddin *et al.*, 2020). Finally, yet importantly, stakeholders' empowerment implies their participation in the evaluation of OI initiatives (Konsti-Laakso and Rantala, 2018), which should contemplate its substantive outcomes, its implications on democratic accountability and its effects on procedural legitimacy, building a greater awareness of OI's impact on public value generation (Kokkinakos *et al.*, 2012).

## 4. Discussion

### 4.1 Unravelling OI in the public sector

This literature review provides us with intriguing insights to answer the research questions. The role of public sector entities in enacting OI is evolving. An indirect approach based on financial and relational aids characterized the early attempts of public sector entities to exploit OI. These initiatives primarily aimed at promoting the establishment of knowledge ecosystems from the outside, according to an inside-out approach aimed at soliciting stakeholders to overcome barriers to collaboration and join forces to boost local and national development (Jugend *et al.*, 2020). At a later stage, public sector entities shifted towards promoting OI through open public data, undertaking an inside-out approach (Kassen, 2017). Stakeholders' access to information which is collected, classified and elaborated by public sector entities is conceived of as an artifact stimulating the implementation of inbound and outbound innovation practices at the crossroad of the public and the private spheres (Palumbo and Fakhir Manesh, 2021). Open government data pave the way for the latest stage of OI evolution in the public sector, which is targeted at establishing a fully-fledged

partnership between public sector entities and stakeholders to advance public value generation according to a co-creation view and embracing a hybrid – inside-out and outside-in – perspective (Casprini and Palumbo, 2022).

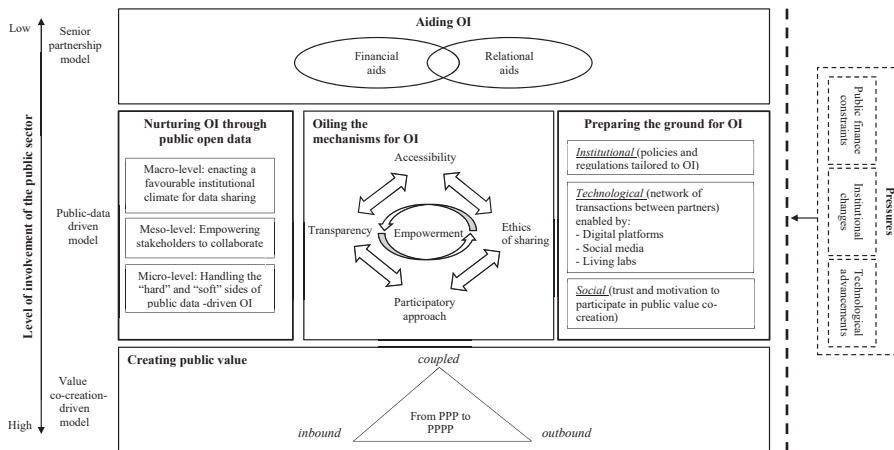
In line with this evolution, a transformation of the scope of OI is acknowledged. The unpredictability of the external environment and the complexity of public management issues make OI essential to enhance the public sector entities' value creation capability and sustain their long-term viability (Lee *et al.*, 2012). Engaging partners in boundaryless innovation is crucial to overcome shortcomings in public finance (Mu and Wang, 2022). Besides, it overcomes the rigidity associated with the bureaucratic nature of public sector entities, facilitating the contamination of management practices inherited from the past with more flexible approaches developed in the private sector (Khanal, 2022). This is critical to improve the adaptability of public sector entities to environmental uncertainty, ensuring public value generation against unforeseen disruption (Heimstädt and Reischauer, 2019) and ushering organizational resilience (Zhang *et al.*, 2022). It is worth noting that OI accommodates technological and institutional changes, complying with the increasing pervasiveness of digital technologies (Ciasullo *et al.*, 2022) – which set the conditions for a digital collaborative economy – and with the transition towards people-centeredness in public management (Palumbo, 2016) – which is underpinned by citizens' participation in public value generation (Mainka *et al.*, 2016).

A socio-technical perspective should be adopted to achieve OI in the public sector (Paskaleva and Cooper, 2018). On the one hand, knowledge sharing and resource integration are spurred by the availability of pervasive and reliable communication infrastructures, within which exchanges across public sector entities and partners are contextualized. On the other hand, OI is continuously nurtured by the stakeholders' commitment to an inter-organizational culture rooted in the value of collaboration and established on the principles of transparency, accessibility, fairness and sharing (Lundgren and Westlund, 2017). Limited ability to manage the intertwinement between the technical and the social side of OI undermines the effectiveness of collaborative innovation, restraining the depth and breadth of knowledge sharing and integration among public sector entities, privately-owned organizations and citizens (Schmidhuber and Hilgers, 2018).

#### *4.2 An integrative framework to unleash OI and avenues for future research*

Figure 4 graphically synthesizes the study findings, arranging them into an integrative framework which consolidates the results of this literature review and highlights the manifold manifestations of OI in the public sector. The intensity of public sector entities' involvement in knowledge ecosystems denotes different forms of OI. Since public sector entities are likely to miss adequate competencies to handle inter-organizational networks targeted to innovation, they usually embrace a senior partnership role. In this circumstance, public sector entities are primarily interested in establishing a positive environment for nurturing inter-organizational relationships, creating robust ties across the stakeholders who contribute to public value generation. This happens in diverse ways, including financial and relational support, with the main purpose of advancing the stakeholders' willingness to participate in innovation ecosystems. Specific examples of the senior partnership model are sectoral programs fostering collaborative research in economic domains which are considered strategic for local and national development. They can be implemented enacting a positive climate for OI and facilitating exchanges among companies, research institutions, public sector entities and the community.

Senior partnership can be understood as the initial step of the journey undertaken by public sector entities towards OI. Although it entails an indirect participation to knowledge ecosystems, it enables the acknowledgement of the challenges that prevent OI and sets the conditions for a deeper involvement of public sector entities in boundaryless innovation.



Source(s): Authors' own creation

**Figure 4.** An interpretive model of the evolution of open innovation in the public sector

Since financial aids and relational support are not necessarily conducive to stakeholders' engagement, they should be accompanied with a committed effort of public sector entities to steer outflows and inflows of knowledge. This prompts the second step of OI, which adheres to a public data-driven framework. Public open data act as triggers of innovation opportunities at the crossroad of the public and the private sectors. Enabling stakeholders to use public data is conducive to their engagement in public value co-creation and augments the spaces for OI. A tripartite intervention is required for this purpose. At the macro level, public sector entities should create a favourable atmosphere for inter-organizational collaboration, boosting the stakeholders' willingness to cooperate and curbing the perceived drawbacks of OI, such as appropriability hazards. At the meso level, public sector entities should empower stakeholders, avoiding backlash in open data accessibility and nurturing a vivid network of inter-organizational relationships. Lastly, the 'hard' and 'soft' sides of OI should be addressed at the micro level, implementing adequate technological solutions to sustain a public data-driven OI framework and encouraging stakeholders to participate in public value co-generation.

This propels a gradual transition towards a new normality of public value generation, which relies on public sector entities' ability to establish co-creating relationships with their stakeholders, here included private companies, third sector organizations and the community. OI is eventually managed as a public value co-generation model. It is based either on an inside-out approach, which is consistent with public data-driven OI and admits stakeholders to take advantage of public sector entities' assets, or on an outside-in approach, which maintains the senior partnership model and enables public sector entities to absorb knowledge and competencies developed in the private sector to advance public value creation. A combination of the two approaches is possible, paving the way for coupled OI. In this case, public value co-creation reaches its peak when citizens participate in OI according to a PPPP approach. Alongside contributing to public service co-production, citizens may have a role in co-designing the physical and virtual spaces where OI is realized (*e.g.* implementing a distributed network model which is continuously evolving based on the users' input) and in generating big public open data, which feed the vivacity of OI.

Exploiting OI in a perspective of public value co-creation requires a fertile ground. Institutional, technological, and social interventions are concomitantly necessary to prepare

the terrain for OI. The void of public policies and regulation about OI should be filled, fostering common interpretations of innovation strategies, overcoming institutional and cultural barriers to stakeholders' involvement and escaping the mismatch of expectations brought by public sector entities, private companies and citizens. Secondly, technological investments are needed to build reliable and accessible hybrid platforms, hosting multiple interactions between public sector entities and stakeholders. Timely access to open data, unconstrained opportunities for collaboration and continuous exchanges across partners are crucial for augmenting the contribution of OI to public value generation. Lastly, public-value driven OI relies on a thick network of binding relationships among stakeholders. From this point of view, it requires social interventions aimed at creating mutual trust and incentivizing the individual and collective participation to public value generation.

Several oiling mechanisms should be crafted to foster the impact of OI on public value generation. OI initiatives should be based on accessibility, ensuring the broad access to opportunities for public value co-creation to relevant stakeholders. This entails implementing tailored interventions aimed at facilitating the involvement of disadvantaged categories in OI ecosystems. In fact, several stakeholders (*e.g.* social and cultural minorities) may be unaware of collaborative innovation initiatives or may have less resources to participate in them. Moreover, transparency should inspire OI. Partners should be able to get all information they need to contextualize their role in public value generation. Their access to relevant data and information should be thoroughly ensured. This calls for a participatory approach to the design and implementation of OI: stakeholders should be enabled to partake in all the steps of OI initiatives, starting from the arrangement of inter-organizational platforms until the evaluation of outcomes. Lastly, an ethics of sharing should inspire public value-driven OI, which is consistent with the establishment of a fully-fledged partnership between public sector entities and stakeholders to augment public value generation. Accessibility, transparency, participation and ethics of sharing nurture the stakeholders' empowerment for their involvement in public-value driven OI, catalysing their contribution to the generation of public value.

#### *4.3 Limitations, implications and avenues for future research*

The study findings should be read acknowledging the limitations which affected this review. Firstly, consistently with the study aim, our research focused on OI, overlooking germane concepts such as distributed innovation and networked innovation. Whilst this decision permitted us to maintain the spotlight on the study domain, shedding light on the strategies and initiatives taken by public sector entities to exploit OI in order to cope with wicked public management issues, it constrained the breadth of our research. Secondly, the items included in this literature review were collected from Scopus®, which represented the sole data source of this study. Nonetheless, the large coverage of Scopus® and the results of the cross-check with WoS™ confirm the comprehensiveness of our literature review. Lastly, the interpretive approach used to systematize items might have allowed for subjective biases in the articulation of the findings' report. Nevertheless, it permitted us to delve into the key insights delivered in the scholarly literature, pushing forward what we currently know about OI in the public sector.

Conceptual and practical implications can be extrapolated from the study results. From a theoretical perspective, a public value-driven interpretation of OI is proposed. It consists with the transversality of challenges faced by public sector entities and complies with recent advancements in the public management literature, which emphasize the need for shifting towards an ecosystem perspective to enhance public value co-creation. OI is typically initiated by public sector entities through financial and relational support, access to open data and networking aimed at engaging private companies, third sector organizations and citizens



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in inbound, outbound and coupled efforts targeted at value co-generation. The establishment of a collaborative ecosystem to augment public value generation is essential to cope with the financial and management constraints experienced by public sector entities and achieve a greater organizational flexibility and adaptability. However, OI does not inherently determine public value co-creation, which calls for strategic, management and cultural alignment across public sector entities and stakeholders.

These conceptual insights inspire the practical implications of our literature review. Institutional, technological and social interventions fostering OI should be carefully designed and accomplished to facilitate the calibration of diverging expectations brought by the stakeholders involved in collaborative innovation. To achieve such alignment, public value-driven OI should be rooted in accessibility, transparency and ethics of sharing. They set the conditions for empowering stakeholders and sustain their committed contribution to public value generation, enacting a participatory inter-organizational climate which is conducive to continuous inbound, outbound and coupled OI.

Further research is needed to push forward our understanding of OI in the public sector. Drawing on the integrative framework reported above, three main avenues for further developments are envisioned. Theoretical advancements are required to frame OI according to a public value generation perspective. This entails finding an alignment across OI, public value co-creation and public service co-production to build new public management archetypes that are fitting with the wicked issues faced by the public sector entities. Contextualizing OI to public value co-creation and public service co-production is expected to advance what we know about the role and the scope of OI in the public sector, providing us with insightful implications for theory and practice. Empirical research is necessitated to shed light on the antecedents of effective OI ecosystems and inspire public management decisions. On the one hand, attention should be given to the institutional, technological and social determinants of positive exchanges between public sector entities and stakeholders, collecting evidence of the interventions that should be taken to prepare the terrain for public value-driven OI. On the other hand, public management models conducive to boundaryless innovation should be investigated, framing the practices that lead to vivid and viable knowledge ecosystems for public value co-creation. Last, but not least, longitudinal studies examining the unfolding dynamics of OI ecosystems' establishment and development should be accomplished. More specifically, future research should be targeted at collecting lengthwise evidence of the determinants and implications of collaborative innovation in the public sector, illuminating the manifold implications of inbound, outbound and coupled OI initiatives involving private companies, third sector organizations and citizens in public value co-creation.

## 5. Conclusion

OI embodies a new model of public value generation which is based on the public sector entities' ability to empower and engage external stakeholders in initiatives aimed at coping with wicked public management issues. The role of public sector entities in enacting OI-based ecosystems is evolving. An inside-out model characterized earlier attempts to establish knowledge ecosystems intended to boost economic and social development. Financial and relational aids express the public sector entities' desire to enable external stakeholders to participate in value co-creation, expanding the reach of the public sector. Applying openness to public data further advances the inside-out perspective and, implicitly, accompanies it with an outside-in perspective. Stakeholders accessing open data provide public sector entities with feedback information and use such data to participate in public management processes. This augments the public sector entities' ability to extrapolate insights from the external environment and to deal with the evolving demands and expectations of the community.

Such process paves the way for a new conceptualization of OI, which is eventually understood as a public management model setting the conditions for boundaryless public value co-creation. Tailored management decisions are required to foster the transition towards a public value-based interpretation of OI. Firstly, the institutional and cultural barriers to stakeholders' involvement inherited from the bureaucratic model should be removed, erasing formal and informal obstacles to OI. Secondly, public sector entities should build-up reliable and dependable hybrid platforms hosting continuous interactions among stakeholders and catalysing inflows and outflows of knowledge. Lastly, the values of accessibility, transparency, fairness and sharing should be continuously maintained, propelling the stakeholders' willingness and desire to participate in public value co-creation.

### References

- Ahn, J., Lee, W. and Mortara, L. (2020), "Do government R&D subsidies stimulate collaboration initiatives in private firms?", *Technological Forecasting and Social Change*, Vol. 151, 119840.
- Almirall, E., Lee, M. and Majchrzak, A. (2014), "Open innovation requires integrated competition-community ecosystems: lessons learned from civic open innovation", *Business Horizons*, Vol. 57 No. 3, pp. 391-400.
- Alves, H. (2013), "Co-creation and innovation in public services", *The Service Industries Journal*, Vol. 33 Nos 7/8, pp. 671-682.
- Androutsopoulou, A., Karacapilidis, N., Loukis, E. and Charalabidis, Y. (2017), "Towards an integrated and inclusive platform for open innovation in the public sector", in Katsikas, S. and Zorkadis, V. (Eds), *E-democracy – Privacy-Preserving, Secure, Intelligent E-Government Services*, Springer, Cham, pp. 228-243.
- Ansell, C. and Torfing, J. (2021), *Public Governance as Co-creation: A Strategy for Revitalizing the Public and Rejuvenating Democracy*, Cambridge University Press, Cambridge.
- Archambault, É., Campbell, D., Gingras, Y. and Larivière, V. (2009), "Comparing bibliometric statistics obtained from the web of science and Scopus", *Journal of the American Society for Information Science and Technology*, Vol. 60 No. 7, pp. 1320-1326.
- Assar, S., Boughzala, I. and Isckia, T. (2011), "eGovernment trends in the web 2.0 era and the open innovation perspective: an exploratory field study", *Lecture Notes in Computer Science*, Vol. 6846, pp. 210-222.
- Bakici, T., Almirall, E. and Wareham, J. (2013), "The role of public open innovation intermediaries in local government and the public sector", *Technology Analysis and Strategic Management*, Vol. 25 No. 3, pp. 311-327.
- Balzano, M. (2022), "Serendipity in management studies: a literature review and future research directions", *Management Decision*, Vol. 60 No. 13, pp. 130-152.
- Barahona, C.J. and Elizondo, M.A. (2014), "Introducing a disruptive service innovation: a national dilemma in E-Procurement", *Management Decision*, Vol. 52 No. 9, pp. 1782-1800.
- Bartlett, D. (2017), "Champions of local authority innovation revisited", *Local Government Studies*, Vol. 43 No. 2, pp. 142-149.
- Bekkers, V. (2012), "Why does e-government looks as it does? Looking beyond the explanatory emptiness of the e-government concept", *Information Polity*, Vol. 17 No. 3, 4, pp. 329-342.
- Bekkers, V. and Tummers, L. (2018), "Innovation in the public sector: towards an open and collaborative approach", *International Review of Administrative Sciences*, Vol. 84 No. 2, pp. 209-213.
- Belyaeva, Z., Shams, S., Santoro, G. and Grandhi, B. (2020), "Unpacking stakeholder relationship management in the public and private sectors: the comparative insights", *EuroMed Journal of Business*, Vol. 15 No. 3, pp. 269-281.

- 
- Blais, A., Blake, D.E. and Dion, S. (1990), "The public/private sector cleavage in North America: the political behavior and attitudes of public sector employees", *Comparative Political Studies*, Vol. 23 No. 3, pp. 381-403.
- Boyack, K.W. and Klavans, R. (2010), "Co-citation analysis, bibliographic coupling, and direct citation: which citation approach represents the research front most accurately?", *Journal of the American Society for Information Science and Technology*, Vol. 61 No. 12, pp. 2389-2404.
- Bryant, A. and Charmaz, K. (2010), *The Sage Handbook of Grounded Theory*, Sage, Thousand Oaks.
- Cano-Kollmann, M., Hamilton, R. and Mudambi, R. (2017), "Public support for innovation and the openness of firms' innovation activities", *Industrial and Corporate Change*, Vol. 26 No. 3, pp. 421-442.
- Caputo, A., Manesh, M.F., Farrukh, M., Farzipoor Saen, R. and Randolph-Seng, B. (2022), "Editorial: over a half-century of management decision: a bibliometric overview", *Management Decision*, Vol. 60 No. 8, pp. 2129-2147.
- Carè, S., Trotta, A., Carè, R. and Rizzello, A. (2018), "Crowdfunding for the development of smart cities", *Business Horizon*, Vol. 61 No. 4, pp. 501-509.
- Casprini, E. and Palumbo, R. (2022), "Reaping the benefits of digital transformation through Public-Private Partnership: a service ecosystem view applied to healthcare", *Global Public Policy and Governance*, Vol. 2 No. 1, pp. 453-476.
- Casprini, E., Dabic, M., Kotlar, J. and Pucci, T. (2020), "A bibliometric analysis of family firm internationalization research: current themes, theoretical roots, and ways forward", *International Business Review*, Vol. 29 No. 5, 101715.
- Chan, C. (2013), "From open data to open innovation strategies: creating e-services using open government data", *46th Hawaii International Conference on System Sciences*, IEEE, Hawaii, pp. 1890-1899.
- Charalabidis, Y., Koussouris, S. and Ramfos, A. (2011), "A cloud infrastructure for collaborative digital public services", *3rd International Conference on Cloud Computing Technology and Science*, IEEE, Athens, pp. 340-347.
- Chatfield, A. and Reddick, C. (2017), "A longitudinal cross-sector analysis of open data portal service capability: the case of Australian local governments", *Government Information Quarterly*, Vol. 34 No. 2, pp. 231-243.
- Chatwin, M. and Arku, G. (2017), "Co-Creating an open government action plan: the case of sekonditakoradi metropolitan assembly, Ghana", *Growth and Change*, Vol. 49 No. 2, pp. 374-393.
- Cheah, S.-Y. and Ho, Y.-P. (2020), "Effective industrial policy implementation for open innovation: the role of government resources and capabilities", *Technological Forecasting and Social Change*, Vol. 151, 119845.
- Chesbrough, H. and Bogers, M. (2014), "Explicating open innovation: clarifying an emerging paradigm for understanding innovation", in Chesbrough, H., Vanhaverbeke, W. and West, J. (Eds), *New Frontiers in Open Innovation*, Oxford University Press, Oxford, pp. 3-28.
- Ciasullo, M.V., Orciuoli, F., Douglas, A. and Palumbo, R. (2022), "Putting Health 4.0 at the service of Society 5.0: exploratory insights from a pilot study", *Socio-Economic Planning Sciences*, Vol. 80, 101163.
- Cohen, B., Almirall, E. and Chesbrough, H. (2016), "The city as a lab: open innovation meets the collaborative economy", *California Management Review*, Vol. 59 No. 1, pp. 5-13.
- Colovic, A., Caloffi, A. and Rossi, F. (2022), "Crowdsourcing and COVID-19: how public administrations mobilize crowds to find solutions to problems posed by the pandemic", *Public Administration Review*, Vol. 82 No. 4, pp. 756-783.
- Common, R.K. (1998), "Convergence and transfer: a review of the globalisation of new public management", *International Journal of Public Sector Management*, Vol. 11 No. 6, pp. 440-450.
- Conradie, P., Mulder, I. and Choenni, S. (2012), "Rotterdam open data: exploring the release of public sector information through co-creation", *18th International Conference on Engineering, Technology and Innovation*, Munich, IEEE, pp. 1-11.

- Criado, J.I. and Guevara-Gómez, A. (2021), "Public sector, open innovation, and collaborative governance in lockdown times. A research of Spanish cases during the COVID-19 crisis", *Transforming Government: People, Process and Policy*, Vol. 15 No. 4, pp. 612-626.
- Cunningham, B.J. and Kempling, J.S. (2009), "Implementing change in public sector organizations", *Management Decision*, Vol. 47 No. 2, pp. 330-344.
- Dabić, M., Maley, J., Dana, L.P., Novak, I., Pellegrini, M.M. and Caputo, A. (2020), "Pathways of SME internationalization: a bibliometric and systematic review", *Small Business Economics*, Vol. 55, pp. 705-725.
- Davies, G.H., Roderick, S. and Huxtable-Thomas, L. (2019), "Social commerce Open Innovation in healthcare management: an exploration from a novel technology transfer approach", *Journal of Strategic Marketing*, Vol. 27 No. 4, pp. 356-367.
- De Coninck, B., Gascó-Hernández, M., Viaene, S. and Leysen, J. (2021), "Determinants of open innovation adoption in public organizations: a systematic review", *Public Management Review*, Published on-line ahead of print, doi: [10.1080/14719037.2021.2003106](https://doi.org/10.1080/14719037.2021.2003106).
- De Vries, H., Tummers, L. and Bekkers, V. (2018a), "A stakeholder perspective on public sector innovation: why position matters", *International Review of Administrative Sciences*, Vol. 84 No. 2, pp. 269-287.
- De Vries, H., Tummers, L. and Bekkers, V. (2018b), "The diffusion and adoption of public sector innovations: a meta-synthesis of the literature", *Perspectives on Public Management and Governance*, Vol. 1 No. 3, pp. 159-176.
- Demircioglu, M.A. and Audretsch, D.B. (2020), "Conditions for complex innovations: evidence from public organizations", *The Journal of Technology Transfer*, Vol. 45, pp. 820-843.
- Dezi, L., Pisano, P., Pironti, M. and Papa, A. (2018), "Unpacking open innovation neighborhoods: le milieu of the lean smart city", *Management Decision*, Vol. 56 No. 6, pp. 1247-1270.
- Díaz-Díaz, R. and Pérez-González, D. (2016), "Implementation of social media concepts for e-government: case study of a social media tool for value Co-creation and citizen participation", *Journal of Organizational and End User Computing*, Vol. 28 No. 3, pp. 104-121.
- Dos Santos, A.C., Zambalde, A.L., Veroneze, R.B., Botelho, G.A. and de Souza Bermejo, P.H. (2015), "Open innovation and social participation: a case study in public security in Brazil", *Lecture Notes in Computer Science*, Vol. 9265, pp. 163-176.
- Edelmann, N., Höchtel, J. and Sachs, M. (2014), "Collaboration for open innovation processes in public administrations", in Charalabidis, Y. and Koussouris, S. (Eds), *Empowering Open and Collaborative Governance*, Springer, Berlin, pp. 21-37.
- Erakovic, L. and Wilson, M. (2006), "The interaction of market and technology in radical transformation: the case of Telecom New Zealand", *International Journal of Public Sector Management*, Vol. 19 No. 5, pp. 468-489.
- Felício, T., Samagaio, A. and Rodrigues, R. (2021), "Adoption of management control systems and performance in public sector organizations", *Journal of Business Research*, Vol. 124 No. 1, pp. 593-602.
- Feller, J., Finnegan, P. and Nilsson, O. (2008), "We have everything to win: collaboration and open innovation in public administration", *29th International Conference on Information Systems*, Valencia, ISD.
- Feller, J., Finnegan, P. and Nilsson, O. (2011), "Open innovation and public administration: transformational typologies and business model impacts", *European Journal of Information Systems*, Vol. 20 No. 3, pp. 358-374.
- Fernandes, C., Ferreira, J. and Peris-Ortiz, M. (2019), "Open innovation: past, present and future trends", *Journal of Organizational Change Management*, Vol. 32 No. 5, pp. 578-602.
- Fernández-Zubieta, A., Andújar-Nagore, I., Giachi, S. and Fernández-Esquinas, M. (2016), "New organizational arrangements for public-private research collaboration", *Journal of the Knowledge Economy*, Vol. 7 No. 1, pp. 80-103.

- 
- Ferraris, A., Santoro, G. and Papa, A. (2018), "The cities of the future: hybrid alliances for open innovation projects", *Futures*, Vol. 103, pp. 51-60.
- Ferraris, A., Santoro, G. and Pellicelli, A. (2020), "'Openness' of public governments in smart cities: removing the barriers for innovation and entrepreneurship", *International Entrepreneurship and Management Journal*, Vol. 16, pp. 1259-1280.
- Fu, X. and Mu, R. (2014), "Enhancing China's innovation performance: the policy choices", *China and World Economy*, Vol. 22 No. 2, pp. 42-60.
- Fu, X. and Xiong, H. (2011), "Open innovation in China: policies and practices", *Journal of Science and Technology Policy in China*, Vol. 2 No. 3, pp. 196-218.
- Fuglsang, L. (2008), "Capturing the benefits of open innovation in public innovation: a case study", *International Journal of Services, Technology and Management*, Vol. 9 Nos 3/4, pp. 234-248.
- Fuglsang, L. and Hansen, A.V. (2022), "Framing improvements of public innovation in a living lab context: processual learning, restrained space and democratic engagement", *Research Policy*, Vol. 51 No. 1, 104390.
- Gagliardi, D., Schina, L., Sarcinella, M., Mangialardi, G., Niglia, F. and Corallo, A. (2017), "Information and communication technologies and public participation: interactive maps and value added for citizens", *Government Information Quarterly*, Vol. 34 No. 1, pp. 153-166.
- Gascó, M. (2017), "Living labs: implementing open innovation in the public sector", *Government Information Quarterly*, Vol. 34 No. 1, pp. 90-98.
- Gershman, M., Roud, V. and Thurner, T. (2019), "Open innovation in Russian state-owned enterprises", *Industry and Innovation*, Vol. 26 No. 2, pp. 199-217.
- Gryszkiewicz, L., Lykouroutzou, I. and Toivonen, T. (2016), "Innovation labs: leveraging openness for radical innovation?", *International Journal of Innovation Management*, Vol. 4 No. 4, pp. 68-97.
- Guerrero, M. and Urbano, D. (2017), "The impact of Triple Helix agents on entrepreneurial innovations' performance: an inside look at enterprises located in an emerging economy", *Technological Forecasting and Social Change*, Vol. 119, pp. 294-309.
- Haley, B. (2016), "Getting the institutions right: designing the public sector to promote clean innovation", *Canadian Public Policy*, Vol. 42 No. 1, pp. 54-66.
- Ham, J., Lee, J.-N., Kim, D. and Choi, B. (2015), "Open innovation maturity model for the government: an open system perspective", *36th International Conference on Information Systems: Exploring the Information Frontier*, Cologne, AIS, pp. 1-11.
- Hameduddin, T., Fernandez, S. and Demircioglu, M. (2020), "Conditions for open innovation in public organizations: evidence from Challenge.gov", *Asia Pacific Journal of Public Administration*, Vol. 42 No. 2, pp. 111-131.
- Heimstädt, M. and Reischauer, G. (2019), "Framing innovation practices in interstitial issue fields: open innovation in the NYC administration", *Innovation*, Vol. 21 No. 1, pp. 128-158.
- Hellberg, A. and Hedström, K. (2015), "The story of the sixth myth of open data and open government", *Transforming Government: People, Process and Policy*, Vol. 9 No. 1, pp. 35-51.
- Hennala, L., Parjanen, S. and Uotila, T. (2011), "Challenges of multi-actor involvement in the public sector front-end innovation processes", *European Journal of Innovation Management*, Vol. 14 No. 3, pp. 364-387.
- Hurmelinna-Laukkanen, P., Nätti, S. and Pikkariainen, M. (2021), "Orchestrating for lead user involvement in innovation networks", *Technovation*, Vol. 108, 102326.
- Isaac-Henry, K. and Painter, C. (1991), "Organisational response to environmental turbulence: the management of change in English local government", *International Journal of Public Sector Management*, Vol. 4 No. 4, pp. 5-20.
- Jugend, D., Jabbour, C., Alves Scaliza, J., Rocha, R., Junior, J., Latan, H. and Salgado, M. (2018), "Relationships among open innovation, innovative performance, government support and firm

- size: comparing Brazilian firms embracing different levels of radicalism in innovation”, *Technovation*, Vols 74/75, pp. 54-65.
- Jugend, D., Fiorini, P., Armellini, F. and Ferrari, A. (2020), “Public support for innovation: a systematic review of the literature and implications for open innovation”, *Technological Forecasting and Social Change*, Vol. 156, p. 119985.
- Kankanhalli, A., Zuiderwijk, A. and Tayi, G.K. (2017), “Open innovation in the public sector: a research agenda”, *Government Information Quarterly*, Vol. 34 No. 1, pp. 84-89.
- Kassen, M. (2017), “Open data in Kazakhstan: incentives, implementation and challenges”, *Information Technology and People*, Vol. 30 No. 2, pp. 301-323.
- Katsonis, M. and Botros, A. (2015), “Digital government: a primer and professional perspectives”, *Australian Journal of Public Administration*, Vol. 74 No. 1, pp. 42-52.
- Khanal, S. (2022), “Open or shut case? Exploring the role of openness in public sector innovation”, *Asia Pacific Journal of Public Administration*, published online ahead of print, doi: [10.1080/23276665.2022.2116585](https://doi.org/10.1080/23276665.2022.2116585).
- Kinder, T. (2010), “E-government service innovation in the scottish criminal justice information system”, *Financial Accountability and Management*, Vol. 26 No. 1, pp. 21-41.
- Koch, G., Füller, J. and Brunswicker, S. (2011), “Online crowdsourcing in the public sector: how to design open government platforms”, in Ozok, A. and Zaphiris, P. (Eds), *OCSC 2011: Online Communities and Social Computing*, Springer, Cham, pp. 203-212.
- Koch, G., Rapp, M. and Kröger, N. (2013), “Harnessing the innovation potential of citizens: how open innovation can be used to co-develop political strategies”, in Pfeffermann, N., Minshall, T. and Mortara, L. (Eds), *Strategy and Communication for Innovation*, Springer, Berlin, pp. 63-83.
- Kokkinakos, P., Koussouris, S., Panopoulos, D., Askounis, D., Ramfos, A., Georgousopoulos, C. and Wittern, E. (2012), “Citizens collaboration and co-creation in public service delivery: the COCKPIT project”, *International Journal of Electronic Government Research*, Vol. 8 No. 3, pp. 44-62.
- Konsti-Laakso, S. (2017), “Stolen snow shovels and good ideas: the search for and generation of local knowledge in the social media community”, *Government Information Quarterly*, Vol. 34 No. 1, pp. 134-139.
- Konsti-Laakso, S. and Rantala, T. (2018), “Managing community engagement: a process model for urban planning”, *European Journal of Operational Research*, Vol. 268 No. 3, pp. 1040-1049.
- Kovács, A., Van Looy, B. and Cassiman, B. (2015), “Exploring the scope of open innovation: a bibliometric review of a decade of research”, *Scientometrics*, Vol. 104, pp. 951-983.
- Kube, M., Hilgers, D., Koch, G. and Füller, J. (2015), “Explaining voluntary citizen online participation using the concept of citizenship: an explanatory study on an open government platform”, *Journal of Business Economics*, Vol. 85 No. 8, pp. 873-895.
- Kumar, S., Sahoo, S., Lim, W.M. and Dana, L.P. (2022), “Religion as a social shaping force in entrepreneurship and business: insights from a technology-empowered systematic literature review”, *Technological Forecasting and Social Change*, Vol. 175, 121393.
- Leckel, A., Veilleux, S. and Dana, L. (2020), “Local Open Innovation: a means for public policy to increase collaboration for innovation in SMEs”, *Technological Forecasting and Social Change*, Vol. 153, 119891.
- Lee, S.M., Hwang, T. and Choi, D. (2012), “Open innovation in the public sector of leading countries”, *Management Decision*, Vol. 50 No. 1, pp. 147-162.
- Lee, J.N., Ham, J. and Choi, B. (2016), “Effect of government data openness on a knowledge-based economy”, *Procedia Computer Science*, Vol. 91, pp. 158-167.
- Lee, S., Noh, M. and Seul, J. (2017), “Government-led regional innovation: a case of ‘Pangyo’ IT cluster of South Korea”, *European Planning Studies*, Vol. 25 No. 5, pp. 848-866.

- 
- Liu, H.K. (2017), "Crowdsourcing government: lessons from multiple disciplines", *Public Administration Review*, Vol. 77 No. 5, pp. 656-667.
- Lopes, A.V. and Farias, J.S. (2022), "How can governance support collaborative innovation in the public sector? A systematic review of the literature", *International Review of Administrative Sciences*, Vol. 88 No. 1, pp. 114-130.
- Loukis, E., Charalabidis, Y. and Androutsopoulou, A. (2017), "Promoting open innovation in the public sector through social media monitoring", *Government Information Quarterly*, Vol. 34, pp. 99-109.
- Lundgren, A. and Westlund, H. (2017), "The openness buzz in the knowledge economy: towards taxonomy", *Environment and Planning C: Politics and Space*, Vol. 35 No. 6, pp. 975-989.
- Mainka, A., Castelnovo, W., Miettinen, V., Bech-Petersen, S., Hartmann, S. and Stock, W. (2016), "Open innovation in smart cities: civic participation and co-creation of public services", *Proceedings of the Association for Information Science and Technology*, Vol. 53 No. 1, pp. 1-5.
- Malsbender, A., Hofmann, S. and Becker, J. (2014), "Aligning capabilities and social media affordances for open innovation in governments", *Australasian Journal of Information Systems*, Vol. 18 No. 3, pp. 317-330.
- Martins, T.C.M., de Souza Bermejo, P.H. and de Souza, W.V.B. (2015), "Open innovation for citizen coproduction", *Lecture Notes in Computer Science*, Vol. 9265, pp. 177-188.
- Meijer, A.J., Curtin, D. and Hillebrandt, M. (2012), "Open government: connecting vision and voice", *International Review of Administrative Sciences*, Vol. 78 No. 1, pp. 10-29.
- Mergel, I. (2015), "Opening government: designing open innovation processes to collaborate with external problem solvers", *Social Science Computer Review*, Vol. 33 No. 5, pp. 599-612.
- Mergel, I. (2018), "Open innovation in the public sector: drivers and barriers for the adoption of Challenge.gov", *Public Management Review*, Vol. 20 No. 5, pp. 726-745.
- Mergel, I. and Desouza, K. (2013), "Implementing open innovation in the public sector: the case of Challenge.gov", *Public Administration Review*, Vol. 73 No. 6, pp. 882-890.
- Mergel, I., Bretschneider, S.I., Louis, C. and Smith, J. (2014), "The challenges of Challenge.gov: adopting private sector business innovations in the federal government", *47th Hawaii International Conference on System Sciences*, Hawaii, IEEE.
- Molinari, F. (2011), "Living Labs as multi-stakeholder platforms for the eGovernance of innovation", *5th International Conference on Theory and Practice of Electronic Governance*, Tallinn, ACM, pp. 131-140.
- Mongeon, P. and Paul-Hus, A. (2016), "The journal coverage of Web of Science and Scopus: a comparative analysis", *Scientometrics*, Vol. 106, pp. 213-228.
- Mroczkowski, T. and Miller, M. (2017), "Envisioning smart development in Poland from a triple helix systems perspective: a critical assessment of the morawiecki plan", *Journal of the Knowledge Economy*, Vol. 8 No. 2, pp. 513-535.
- Mu, R. and Wang, H. (2022), "A systematic literature review of open innovation in the public sector: comparing barriers and governance strategies of digital and non-digital open innovation", *Public Management Review*, Vol. 24 No. 4, pp. 489-511.
- Niehaves, B. (2010), "Open process innovation: the impact of personnel resource scarcity on the involvement of customers and consultants in public sector BPM", *Business Process Management Journal*, Vol. 16 No. 3, pp. 377-393.
- Orlando, B., Ballestra, L., Magni, D. and Ciampi, F. (2021), "Open innovation and patenting activity in health care", *Journal of Intellectual Capital*, Vol. 22 No. 2, pp. 384-402.
- Palmatier, R.W., Houston, M.B. and Hulland, J. (2017), "Review articles: purpose, process, and structure", *Journal of the Academy of Marketing Science*, Vol. 46 No. 1, pp. 1-5.

- Palumbo, R. (2016), "Contextualizing co-production of health care: a systematic literature review", *International Journal of Public Sector Management*, Vol. 29 No. 1, pp. 72-90.
- Palumbo, R. and Fakhar Manesh, M. (2021), "Travelling along the public service co-production road: a bibliometric analysis and interpretive review", *Public Management Review*, Published online ahead of print, doi: [10.1080/14719037.2021.2015222](https://doi.org/10.1080/14719037.2021.2015222).
- Palumbo, R., Petrolo, D. and Fakhar Manesh, M. (2022), "What makes work smart in the public sector? Insights from a bibliometric analysis and interpretive literature review", *Public Management Review*, Published online ahead of print, doi: [10.1080/14719037.2022.2152479](https://doi.org/10.1080/14719037.2022.2152479).
- Parveen, S., Senin, A. and Umar, A. (2015), "Organization culture and open innovation: a quadruple helix open innovation model approach", *International Journal of Economics and Financial Issues*, Vol. 5 No. 1, pp. 335-342.
- Paskaleva, K. and Cooper, I. (2018), "Open innovation and the evaluation of internet-enabled public services in smart cities", *Technovation*, Vol. 78, pp. 4-14.
- Paul, J. and Criado, A.R. (2020), "The art of writing literature review: what do we know and what do we need to know?", *International Business Review*, Vol. 29 No. 4, 101717.
- Paul, J., Lim, W.M., O'Cass, A., Hao, A.W. and Bresciani, S. (2021), "Scientific procedures and rationales for systematic literature reviews (SPAR-4-SLR)", *International Journal of Consumer Studies*, Vol. 45 No. 4, pp. 1-16.
- Pedersen, K. (2020), "What can open innovation be used for and how does it create value?", *Government Information Quarterly*, Vol. 37 No. 2, p. 101459.
- Pesh, U. (2008), "The publicness of public administration", *Administration and Society*, Vol. 40 No. 2, pp. 170-193.
- Queyroi, Y., Carassus, D., Maurel, C., Favoreu, C. and Marin, P. (2022), "Local public innovation: an analysis of its perceived impacts on public performance", *International Review of Administrative Sciences*, Vol. 88 No. 2, pp. 493-510.
- Radnor, Z., Osborne, S.P., Kinder, T. and Mutton, J. (2014), "Operationalizing Co-production in public services delivery: the contribution of service blueprinting", *Public Management Review*, Vol. 16 No. 3, pp. 402-423.
- Randhawa, K., Wilden, R. and West, J. (2019), "Crowdsourcing without profit: the role of the seeker in open social innovation", *R&D Management*, Vol. 49 No. 3, pp. 298-317.
- Sandoval-Almazan, R., Ramon Gil-Garcia, J. and Valle-Cruz, D. (2017), "Going beyond bureaucracy through gamification: innovation labs and citizen engagement in the case of 'Mapaton' in Mexico City", in Paulin, A., Anthopoulos, L. and Reddick, C. (Eds), *Beyond Bureaucracy. Public Administration and Information Technology*, Springer, Cham, pp. 133-149.
- Sandoval-Almazan, R. and Valle-Cruz, D. (2017), "Open innovation, living labs and public officials", *Proceedings of the 10th International Conference on Theory and Practice of Electronic Governance*, New Delhi, Association for Computer Machinery.
- Schmidhuber, L. and Hilgers, D. (2018), "Unleashing innovation beyond organizational boundaries: exploring citizen sourcing projects", *International Journal of Public Administration*, Vol. 41 No. 4, pp. 268-283.
- Schmidhuber, L., Piller, F., Bogers, M. and Hilgers, D. (2019), "Citizen participation in public administration: investigating open government for social innovation", *R&D Management*, Vol. 49 No. 3, pp. 343-355.
- Scuotto, V., Ferraris, A. and Bresciani, S. (2016), "Internet of things: applications and challenges in smart cities. A case study of IBM smart city projects", *Business Process Management Journal*, Vol. 22 No. 2, pp. 357-367.
- Seidel, C.E., Thapa, B.E.P., Plattfaut, R. and Niehaves, B. (2013), "Selective crowdsourcing for open process innovation in the public sector", *Proceedings of the 7th International Conference on Theory and Practice of Electronic Governance*, Seoul, Association for Computing Machinery.



- 
- Smith, G. and Sandberg, J. (2018), "Barriers to innovating with open government data: exploring experiences across service phases and user types", *Information Polity*, Vol. 23 No. 3, pp. 249-265.
- Smith, G., Sochor, J. and Karlsson, I.C. (2019), "Public-private innovation: barriers in the case of mobility as a service in West Sweden", *Public Management Review*, Vol. 21 No. 1, pp. 116-137.
- Spender, J.C., Corvello, V., Grimaldi, M. and Rippa, P. (2017), "Startups and open innovation: a review of the literature", *European Journal of Innovation Management*, Vol. 20 No. 1, pp. 4-30.
- Susha, I., Grönlund, A. and Janssen, M. (2015), "Driving factors of service innovation using open government data: an exploratory study of entrepreneurs in two countries", *Information Polity*, Vol. 20 No. 1, pp. 19-34.
- Tate, M., Bongiovanni, I., Kowalkiewicz, M. and Townson, P. (2018), "Managing the "Fuzzy front end" of open digital service innovation in the public sector: a methodology", *International Journal of Information Management*, Vol. 39, pp. 186-198.
- Thapa, B., Niehaves, B., Seidel, C. and Plattfaut, R. (2015), "Citizen involvement in public sector innovation: government and citizen perspectives", *Information Polity*, Vol. 20 No. 1, pp. 3-17.
- Tranfield, D., Denyer, D. and Smart, P. (2003), "Towards a methodology for developing evidence-informed management knowledge by means of systematic review", *British Journal of Management*, Vol. 14 No. 3, pp. 207-222.
- Tsiotsou, R.H. and Boukis, A. (2022), "In-home service consumption: a systematic review, integrative framework and future research agenda", *Journal of Business Research*, Vol. 145, pp. 49-64.
- Van der Duin, P., Heger, T. and Schlesinger, M. (2014), "Toward networked foresight? Exploring the use of futures research in innovation networks", *Futures*, Vol. 59, pp. 62-78.
- Van Duivenboden, H. and Thaens, M. (2008), "ICT-driven innovation and the culture of public administration: a contradiction in terms?", *Information Polity*, Vol. 13 Nos 3-4, pp. 213-232.
- van Eck, N. and Waltman, L. (2010), "Software survey: VOSviewer, a computer program for bibliometric mapping", *Scientometrics*, Vol. 84 No. 2, pp. 523-538.
- van Eck, N.J. and Waltman, L. (2017), "Citation-based clustering of publications using CitNetExplorer and VOSviewer", *Scientometrics*, Vol. 111 No. 2, pp. 1053-1070.
- Venturini, K. and Verbano, C. (2017), "Open innovation in the public sector", *Business Process Management Journal*, Vol. 23 No. 6, pp. 1337-1358.
- Vera-Baceta, M.-A., Thelwall, M. and Kousha, K. (2019), "Web of science and Scopus language coverage", *Scientometrics*, Vol. 121, pp. 1803-1813.
- Waltman, L. and van Eck, N.J. (2012), "A new methodology for constructing a publication-level classification system of science", *Journal of the American Society for Information Science and Technology*, Vol. 63 No. 12, pp. 2378-2392.
- Wijnhoven, F., Ehrenhard, M. and Kuhn, J. (2015), "Open government objectives and participation motivations", *Government Information Quarterly*, Vol. 32 No. 1, pp. 30-42.
- Yang, Z. and Kankanhalli, A. (2013), "Innovation in government services: the case of open data", in Dwivedi, Y.K. (Ed.), *Grand Successes and Failures in IT. Public and Private Sectors*, Springer, Bangalore, pp. 644-651.
- Yuan, Q. and Gasco-Hernandez, M. (2021), "Open innovation in the public sector: creating public value through civic hackathons", *Public Management Review*, Vol. 23 No. 4, pp. 523-544.
- Zhang, D., Li, S. and Zheng, D. (2017a), "Knowledge search and open innovation performance in an emerging market: moderating effects of government-enterprise relationship and market focus", *Management Decision*, Vol. 55 No. 4, pp. 634-647.
- Zhang, N., Zhao, X., Zhang, Z., Meng, Q. and Tan, H. (2017b), "What factors drive open innovation in China's public sector? A case study of official document exchange via microblogging (ODEM) in Haining", *Government Information Quarterly*, Vol. 34 No. 1, pp. 126-133.

- Zhang, Y., Wang, W., Mi, L., Huang, C., Xiao, H., Shang, K., Qiao, L. and Wang, L. (2022), "Organizational resilience in development: a systematic review based on bibliometric analysis and visualization", *International Journal of Disaster Risk Reduction*, Vol. 83, 103408.
- Zheng, C. and Hu, M.C. (2018), "An exploration of the application of universities as artificial institutional entrepreneurs: the case of China", *Journal of Public Affairs*, Vol. 18 No. 1, p. e1697.
- Zheng, F., Jiao, H. and Cai, H. (2018), "Reappraisal of outbound open innovation under the policy of China's 'Market for Technology'", *Technology Analysis and Strategic Management*, Vol. 30 No. 1, pp. 1-14.
- Zimmermann, H.D. and Pucihar, A. (2015), "Open innovation, open data and new business models", in Doucek, P., Chroust, G. and Oskrdal, V. (Eds), *23rd Interdisciplinary Information and Management Talks*, Information Technology and Society, Poděbrady, pp. 449-458.
- Zupic, I. and Čater, T. (2015), "Bibliometric methods in management and organization", *Organizational Research Methods*, Vol. 18 No. 3, pp. 429-472.

Appendix

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Baktici T., Almirall E., Wareham J.	The role of public open innovation intermediaries in local government and the public sector	2013	Article	Technology Analysis and Strategic Management	B	2	The article investigates the role of public OI intermediaries, examining how they set the conditions for collaboration between public sector entities and privately-owned companies	Public OI intermediaries orchestrate the collaboration among public sector entities and privately-owned organizations, playing a critical role in executing innovation projects	Blue	32
Belyaeva Z., Shams S.M.R., Santoro G., Grandhi B.	Unpacking stakeholder relationship management in the public and private sectors: the comparative insights	2020	Review	EuroMed Journal of Business	C	1	The article presents the wide spectrum of stakeholder management in the public and the private sectors, with a specific focus on OI	Public sector entities may miss the competences and resources to innovate through an OI approach, even though open strategies are essential to solve current public management issues	Blue	13
Georgousopoulos G., Ziouvelou Z., Ramfos R., Kokkinakos P., Anshu J., Gangadharan G.R., Taher H.	Applying open innovation strategies to eGovernment for better public services	2013	Book Chapter	E-Government Success Factors and Measures: Theories, Concepts, and Methodologies	N/A	N/A	The article advances an OI model based on democratic engagement between service providers and recipients; citizenship is put at the core of public service delivery	A shift towards citizen-centeredness and user empowerment is needed to realize the full potential of OI in the public sector, enabling user-driven innovation of public services	Blue	6

(continued)

**Table A1.**  
The list of records included in the literature review

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Edelmann N., Höchtl J., Sachs M.	Collaboration for open innovation processes in public administrations	2014	Book Chapter	Empowering Open and Collaborative Governance: Technologies and Methods for Online Citizen Engagement in Public Policy Making	N/A	N/A	The article conceptually discusses the new paradigm of collaborative innovation triggered by digitalization	The pervasiveness of ICTs, the increasing digital literacy of citizens, and the stakeholders' willingness to participate in value co-creation enable OI and boundary/less innovation practices	Blue	13
Feller J., Finnegan P., Nilsson O.	Open innovation and public administration: Transformational typologies and business model impacts	2011	Article	European Journal of Information Systems	A*	4	The article explores how OI strategies can transform public administration, investigating the implications of networking on the creation and exploitation of new ideas	Public sector entities use various approaches and practices to implement outside-in, inside-out, and coupled OI processes; OI nurtures new business models for the public sector	Blue	94
Feller J., Finnegan P., Nilsson O.	"We have everything to win": Collaboration and open innovation in public administration	2008	Conference Paper	ICIS 2008 Proceedings - Twenty Ninth International Conference on Information Systems	N/A	N/A	The article investigates Swedish municipal authorities' initiatives to move from isolated innovation to purposive leveraging of OI	Different configurations of OI inspire knowledge inflows and outflows across the ecosystems enacted by public sector entities; tailored actions should be taken to engage stakeholders in such configurations and stimulate them to share knowledge	Blue	10

*(continued)*

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Fu X., Xiong H.	Open innovation in China: Policies and practices	2011	Review	Journal of Science and Technology Policy in China	N/A	N/A	The article reviews the evolutionary trend of OI policies and practices in the Chinese context, contemplating the role of globalization	Public sector entities play a critical role in supporting OI and oiling collaborative innovation; alongside protecting intellectual property rights, they facilitate stakeholders' participation to international technological exchanges and to large scientific endeavours	Blue	26
Hameduddin T., Fernandez S., Demircioglu M.A.	Conditions for open innovation in public organizations: evidence from <a href="http://Challenge.gov">Challenge.gov</a>	2020	Article	Asia Pacific Journal of Public Administration	N/A	N/A	The article examines whether organizational and individual factors predict the adoption of OI in the public sector	Employees' empowerment is needed to enhance OI performance; public servants should possess adequate knowledge and skills to deal with the unprecedented challenges triggered by OI	Blue	11

(continued)

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Kinder T.	E-Government service innovation in the Scottish criminal justice information system	2010	Article	Financial Accountability and Management	A	3	The article argues the need for a reconceptualization of e-government projects in light of the scholarly debate on OI	Embracing a top-down perspective, adopting a technology-driven orientation, and pursuing over-ambitious process reduce the effectiveness of OI in the public sector	Blue	15
Koch G., Füller J., Brunswicker S.	Online crowdsourcing in the public sector: How to design open government platforms	2011	Conference Paper	Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)	N/A	N/A	The article investigates if, and under which conditions, crowdsourcing platforms can be applied to pave the way for OI in the public sector	Whilst design frameworks derived from research on OI in the private sector can be partially applied to the public sector, attention should be paid to community management and offline events, which are essential to make stakeholders willing to participate in public value co-creation	Blue	29

(continued)

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Koch G., Rapp M., Kröger N.	Harnessing the innovation potential of citizens: How open innovation can be used to co-develop political strategies	2013	Book Chapter	Strategy and Communication for Innovation	N/A	N/A	The paper examines how an online co-creating approach can be designed according to an OI perspective to collaboratively develop a political strategy with experts and citizens	Public sector entities should pay attention to stakeholders' recruitment and activation strategies, as well as to community management, to achieve continuous stakeholders' engagement, offline and virtual interactions should be concomitantly exploited	Blue	5
Kokkinakos P., Koussouris S., Panopoulos D., Askounis D., Ramfos A., Georgousopoulos C., Wittern E.	Citizens collaboration and co-creation in public service delivery: The COCKPIT project	2012	Article	International Journal of Electronic Government Research	C	N/A	The article investigates the new opportunities for mass collaboration between citizens and public administrations to enact public value co-creation	OI in the public sector is conducive to engaging, motivating, and empowering citizens in the public service delivery decision making process, capitalizing on innovative digital technologies to enhance democracy and empower people	Blue	27

*(continued)*

Table A1.

Table A1.

Authors	Title	Year	Document type	Source title	ABDC ranking	AJG ranking	Study aims	Main findings	Cluster	Cited by
Koisti-Laakso S, Rantala T.	Managing community engagement: A process model for urban planning	2018	Article	European Journal of Operational Research	A*	4	The study develops a process model for managing community engagement in urban planning investigating the implications of OI	To achieve effectiveness, attention should be paid to what kinds of stakeholder groups participate in OI and how the participation is accomplished; a comprehensive engagement of stakeholders creates meaningfulness, which advances commitment to OI	Blue	14
Lundgren A, Westlund H.	The openness buzz in the knowledge economy: Towards taxonomy	2017	Article	Environment and Planning C: Politics and Space	B	3	The article introduces a taxonomy to analyse the concept of openness and illuminate the distinguishing attributes of OI	Accessability, transparency, participation, and a logic of sharing should deeply inspire OI initiatives, enacting cultural embeddedness of public value co-creation	Blue	5
Mroczkowski T, Miller M.	Envisioning Smart Development in Poland from a Triple Helix Systems Perspective: a Critical Assessment of the Mora wicki Plan	2017	Article	Journal of the Knowledge Economy	C	N/A	The article embraces the Triple Helix perspective to explore the attributes of the plan for innovation-based development for Poland	Context-specific and permanent mechanisms of interaction at the junctions among the public sector entities and the privately-owned companies involved in the innovation ecosystem is needed to accomplish OI	Blue	10

(continued)



Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Parveen S, Senin A.A., Umar A.	Organization culture and open innovation: A quadruple helix open innovation model approach	2015	Article	International Journal of Economics and Financial Issues	C	N/A	The study analyses the relationship between organizational culture and OI, contemplating how a quadruple helix approach influences the implementation of collaborative innovation	The adoption of a quadruple helix approach increases the stakeholders' willingness to participate in OI, stimulating risk-taking propensity and adding to the commitment towards OI	Blue	13
Van Duivenboden H, Thaeens M.	ICT-driven innovation and the culture of public administration: A contradiction in terms?	2008	Article	Information Polity	C	N/A	The article sheds light on the relationship existing between ICT-innovations and the culture of public administration, with a focus on OI	The traditional bureaucratic organizational culture of public sector entities prevents the implementation of OI initiatives; to overcome this issue, the reciprocity between innovation and organizational culture should be exploited	Blue	26

*(continued)*

Table A1.

Authors	Title	Year	Document type	Source title	ABDC ranking	AJG ranking	Study aims	Main findings	Cluster	Cited by
Androutsopoulou A., Karacapilidis N., Loukis E., Charalabidis Y.	Towards an integrated and inclusive platform for open innovation in the public sector	2017	Conference Paper	Communications in Computer and Information Science	N/A	N/A	The article investigates how the combination of existing ICTs support and advance OI implementation in the public sector	To advance the effectiveness of OI, integration should be achieved between collaboration and decision support tool, as well as between data collection and analysis tools; this enacts a collaborative environment allowing stakeholders immersion in OI	Green	5
Carè S., Trotta A., Carè R., Rizzello A.	Crowdfunding for the development of smart cities	2018	Article	Business Horizons	B	2	The article advances an explorative approach to investigate the civic crowdfunding phenomenon and its ability to promote community development through OI	OI initiatives have been found to contribute to the creation of new forms of community development by promoting new spheres of relationships between the public and private sectors; this primarily happens through citizens' involvement and the wisdom of the crowd	Green	18

(continued)

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Chatwin M, Arku G.	Co-creating an Open Government Action Plan: The Case of Sekondi-Takoradi Metropolitan Assembly, Ghana	2018	Article	Growth and Change	B	2	The article investigates OI at the subnational level in developing countries, shedding light on the motivations of public sector entities to utilize the stakeholders' capabilities	Information transparency, public participation, and accountability are conducive to increased stakeholders' participation to OI; public sector entities which fall short in ensuring transparency and accountability are not able to take advantage of stakeholders' involvement	Green	9
Dezi L, Pisano P., Pironti M., Papa A.	Unpacking open innovation neighborhoods: le millet of the lean smart city	2018	Article	Management Decision	B	2	The paper examines how public sector entities encourage the entry of privately-owned companies and citizens in public collaborations	Since public sector entities lack the knowledge and management capabilities to thrive in OI-activated contexts, ICTs and digital tools should be exploited to foster the public sector entities' capacity to adopt an entrepreneurial approach and a start-up mentality to steer public value co-creation initiatives	Green	20

(continued)

Table A1.

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Díaz-Díaz R., Pérez-González D.	Implementation of social media concepts for e-Government: Case study of a social media tool for value co-creation and citizen participation	2016	Article	Journal of Organizational and End User Computing	B	1	The study intends to broaden the knowledge on ambitious social media projects implemented by local public administrations for e-Government, according to an OI perspective	Several ingredients are needed in the recipe for OI effectiveness, such as: the public sector entities' commitment in the project, the creation of a community manager to engage stakeholders, and the implementation of a technological infrastructure which is secure and easy to use	Green	27
Ferraris A., Santoro G., Papa A.	The cities of the future: Hybrid alliances for open innovation projects	2018	Review	Futures	B	2	The study examines the strategies followed and the challenges met by privately-owned companies in arranging OI strategies with public sector entities	The success of OI strategies is affected by the richness and the vividness of the network of stakeholders with which public sector entities interact; the inclusion in a vivid network encourages explorative alliances and nurtures OI	Green	32

(continued)

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Ferraris A., Santoro G., Pellicelli A.C.	"Openness" of public governments in smart cities: removing the barriers for innovation and entrepreneurship	2020	Article	International Entrepreneurship and Management Journal	C	1	The article analyses OI in public governments and addresses the barriers and challenges that public governments face in smart city development	Lack of rules, blurred responsibilities and tasks, inadequate inter-organizational communication, risk adversity, and limited resources represent the most relevant barriers to OI	Green	18
Konsti-Laakso S.	Stolen snow shovels and good ideas: The search for and generation of local knowledge in the social media community	2017	Article	Government Information Quarterly	N/A	3	The study investigates how citizen online communities support OI practices in the public sector and which contributions are produced	Stakeholders' participation in OI shows a networked nature; a contributors-centred approach should be taken to stimulate stakeholders' participation and increase their retention in OI initiatives	Green	16

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Table A1.

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Kube M., Hilgers D., Koch G., Füller J.	Explaining voluntary citizen online participation using the concept of citizenship: an explanatory study on an open government platform	2015	Article	Journal of Business Economics	N/A	2	The paper develops a framework to make sense of citizen participation in OI initiatives enacted by public sector entities	Stakeholders use their participation in OI initiatives to learn and push forward their own ideas; whilst faith in the political system does not significantly affect participation, easiness of use of the tools and platforms used to enact OI increase stakeholders' engagement in public value co-creation	Green	16
Loukis E., Charalabidis Y., Androutsopoulou A.	Promoting open innovation in the public sector through social media monitoring	2017	Article	Government Information Quarterly	N/A	3	The article advances a novel method of monitoring social conditions for OI in the public sector	Monitoring social media enacts a passive citizensourcing, which is conducive to promoting and supporting OI with limited efforts and generates a greater degree of stakeholders' participation to public value co-creation	Green	56

(continued)

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Paskaleva K, Cooper I.	Open innovation and the evaluation of internet-enabled public services in smart cities	2018	Article	Technovation	A	3	The study proposes a new operationalization of co-production and co-evaluation of civic services in smart cities; introducing OI	To achieve effective stakeholders' participation in OI, public sector entities should make an effort to integrate innovation management with evaluation capabilities, merging the hard and soft side of OI	Green	19
Randhawa K, Wilden R, West J.	Crowdsourcing without profit: the role of the seeker in open social innovation	2019	Article	R and D Management	A	3	The article examines the organizational choices of public sector entities that crowdsource from citizens to drive OI and develop new ways to address societal problems	Since the motives and societal goals of public sector entities are fundamentally different from those of privately-owned companies, OI strategies should linger on the intrinsic motivation of stakeholders and leverage their identity, emphasizing their contribution to public value generation	Green	17

(continued)

Table A1.

Table A1.

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Santos A.C.D., Zambalde A.L., Veroneze R.B., Borelho G.A., De Souza Bermejo P.H.	Open innovation and social participation: A case study in public security in Brazil	2015	Conference Paper	Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Biominformatics)	N/A	N/A	The article appreciates the implications of community participation in addressing major local problems, relying on OI enacted by advanced ICTs	OI enables public sector entities to cope with relevant public management issues through crowdstorming, transforming individual knowledge in collective intelligence; however, tailored incentive schemes should be devised to overcome the resistances to partake in public value co-creation	Green	12
Schmidhuber L., Hilgers D.	Unleashing Innovation beyond Organizational Boundaries: Exploring Citizensourcing Projects	2018	Article	International Journal of Public Administration	B	2	The article investigates the OI phenomenon beyond the entrepreneurial domain, focusing on open government	The OI phenomenon paves the way for a greater attention paid by public sector entities to citizensourcing, which entails the active participation of people in giving advice to public sector entities and co-designing and co-producing public services	Green	21

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Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Schmidhuber L., Piller F., Bogers M., Hilgers D.	Citizen participation in public administration: investigating open government for social innovation	2019	Article	R and D Management	A	3	The study investigates what motivates citizens to participate in OI and how such motivations influence their involvement	Drawing on Social Determination Theory, the authors argue that involvement in OI is intrinsically motivated; conversely, external regulation reduces the individual willingness to share ideas and to actively participate in public value co-creation	Green	17
Thapa B.E.P., Niehaves B., Seidel C.E., Plattfaust R.	Citizen involvement in public sector innovation: Government and citizen perspectives	2015	Article	Information Polity	C	N/A	Embracing the government perspective and looking at OI, the article attempts to highlight key issues affecting citizens' involvement	Different factors motivate people to participate in OI initiatives aimed at tackling public management issues; financial incentives are not always effective; socio-demographic variables and previous experiences play a role in determining the individual desire to participate in OI	Green	19

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Table A1.

Authors	Title	Year	Document type	Source title	ABDC ranking	AJG ranking	Study aims	Main findings	Cluster	Cited by
Wijnhoven F., Ehrenhard M., Kuhn J.	Open government objectives and participation motivations	2015	Article	Government Information Quarterly	N/A	3	The study attempts to identify the motivations for participation in OI and open government focusing on the free/libre open-source software	Whilst socio-demographic attributes do not seem to affect stakeholders' willingness to participate in OI, the complexity and ambitiousness of OI projects reduce the individual desire to partake in public value co-creation	Green	106
Yuan Q., Gasco-Hernandez M.	Open innovation in the public sector: creating public value through civic hackathons	2021	Article	Public Management Review	A	4	The paper investigates the outcomes of OI in the public sector, pointing out its contribution to public value generation	Collective events, such as hackathons, foster stakeholders' involvement in public value co-creation, facilitating the encounter between public sector entities' expectations and stakeholders' contributions	Green	5
Bartlett D.	Champions of local authority innovation revisited	2017	Article	Local Government Studies	A	2	The article provides a conceptual advancement of public sector innovation champions, who are involved in aligning stakeholders in OI networks	A shift from boundary spanning to social capitalism is needed to advance the engagement of stakeholders in exploiting public open data and other relevant resources for value co-creation	Purple	6

(continued)

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Bekkers V., Tummers L.	Innovation in the public sector: Towards an open and collaborative approach	2018	Article/ Editorial	International Review of Administrative Sciences	C	3	The article discusses the changing perspective of the public management literature on innovation-related issues	Innovation in the public sector is inherently conceived of as an open process of collaboration; to boost public value generation, the different notions of value held by stakeholders should be aligned, fostering their cooperation	Purple	23
Chatfield A.T., Reddick C.G.	A longitudinal cross-sector analysis of open data portal service capability: The case of Australian local governments	2017	Article	Government Information Quarterly	N/A	3	The article investigates if and how open data portal service capabilities differ in terms of open data provision, data format variety, open data policy intensity, and entrepreneurial data service, focusing on open government data initiatives	Public sector entities should invest in their own open government data portals rather than in outsourcing; furthermore, they should be leaders in sharing public data through their open government portals	Purple	51

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Table A1.

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Gagliardi D., Schina L., Sarcinella M.L., Mangialardi G., Niglia F., Corallo A.	Information and communication technologies and public participation: interactive maps and value added for citizens	2017	Article	Government Information Quarterly	N/A	3	The study examines how open data may be used to provide innovative services together with simple and standardized elaborations and innovative visualization techniques	Alongside opening data-banks, public sector entities should make an effort to meet the citizens' needs through the direct provision of relevant services fostering participation in public value co-creation	Purple	55
Gascó M.	Living labs: Implementing open innovation in the public sector	2017	Article	Government Information Quarterly	N/A	3	The study intends to understand the role of living labs as intermediaries of public OI	Living labs can be conceived of as OI intermediaries, facilitating the stakeholders' access to relevant data and information to participate in public value creation initiatives	Purple	83
Gryskiewicz L., Lykourantzou I., Toivonen T.	Innovation labs: Leveraging openness for radical innovation?	2016	Review	Journal of Innovation Management	C	N/A	The article embraces an exploratory perspective to investigate how the principle of openness unfolds throughout the innovation process in the public sector	A collaborative culture should be established to unleash the potential of OI in the public sector, relying on stakeholders' long-term engagement, mutual trust, and commitment to public value generation	Purple	16

*(continued)*

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Ham J., Lee J.-N., Kim D.J., Choi B.	Open innovation maturity model for the government: An open system perspective	2015	Conference Paper	2015 International Conference on Information Systems: Exploring the Information Frontier, ICIS 2015	N/A	N/A	The article develops a government-level OI maturity model to understand data-driven OI practices in the public sector	A holistic approach should be embraced to understand the relationships and interactions between public sector entities and the external environment, acknowledging the enablers and the barriers to OI	Purple	13
Hellberg A.-S., Hedström K.	The story of the sixth myth of open data and open government	2015	Article	Transforming Government: People, Process and Policy	B	2	The study adopts a storytelling approach to describe the efforts implemented by public sector entities to realize an open government agenda	Although stakeholders might appreciate the access to public open data, they do not necessarily use them; public sector entities should create incentives to the use of public open data and should provide people with the knowledge and skills to effectively use them	Purple	47

(continued)

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Kassen M.	Open data in Kazakhstan: incentives, implementation and challenges	2017	Article	Information Technology and People	N/A	3	The paper analyses how open data boost public sector innovation, shedding light on engagement initiatives that stimulate citizens and stakeholders' participation to public value creation	Enabling the access to public open data does not affect the fundamentals of the political system and falls short in advancing traditional democratic institutions; attention should be paid to setting an institutional climate which is conducive to stakeholders' willingness to use public open data	Purple	30
Malsbender A., Hofmann S., Becker J.	Aligning capabilities and social media affordances for open innovation in governments	2014	Article	Australasian Journal of Information Systems	A	1	The paper advances a framework for supporting the use of social media affordances for service innovation in the public sector	Alongside participation and collaboration, transparency is required to enable OI and facilitate stakeholders' involvement in addressing public management issues. Public sector entities should develop specific capabilities to implement enabling infrastructures stakeholders' access to public open data	Purple	11

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Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Sandoval-Almazan R., Ramon Gil-Garcia J., Valle-Cruz D.	Going beyond bureaucracy through gamification: Innovation labs and citizen engagement in the case of "Mapaton" in Mexico City	2017a	Book Chapter	Public Administration and Information Technology	N/A	N/A	Relying on Technology Enactment Framework and conceptual advancements on gamification, the study investigates how citizens can be involved in an OI effort aimed at public value co-generation	Public sector entities can embrace a capacity building perspective that empowers people and stakeholders, providing them with data and information to solve public management issues and participate in public value generation	Purple	6
Sandoval-Almazan R., Valle-Cruz D.	Open innovation, living labs and public officials: The case of "mapaton" in Mexico	2017b	Conference Paper	ACM International Conference Proceeding Series	N/A	N/A	The article reports a specific case of OI, adopting the OI Process Phases to determine the requisites to the implementation of successful OI	The generation of mutual trust is essential to make interlocutors involved in OI willing to use public open data for the purpose of value creation	Purple	7

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Table A1.

Authors	Title	Year	Document type	Source title	ABDC ranking	AJG ranking	Study aims	Main findings	Cluster	Cited by
Smith G., Sandberg J.	Barriers to innovating with open government data: Exploring experiences across service phases and user types	2018	Article	Information Polity	C	N/A	The article attempts to identify the barriers and obstacles preventing users of open government data to participate in OI initiatives that are beneficial to society	Perceived barriers to the use of open government data are shaped by the motivations, pre-conditions, approach, and objectives taken by relevant stakeholders; increased provision of open data does not generate value, if extant barriers to their use perceived by stakeholders are not tackled	Purple	24
Susha L., Grönlund A., Janssen M.	Driving factors of service innovation using open government data: An exploratory study of entrepreneurs in two countries	2015	Article	Information Polity	C	N/A	The article identifies and discusses the driving factors of open data adoption for service innovation	To facilitate the use of open data, public sector entities should enhance the transparent access, as well as the interoperability and combinability of data; moreover, continuous support should be ensured to stakeholders interested in public open data	Purple	37

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Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Tate M, Bongiovanni L, Kowalkiewicz M, Townson P.	Managing the "Fuzzy front end" of open digital service innovation in the public sector: A methodology	2018	Article	International Journal of Information Management	A*	2	The article illuminates the barriers and obstacles to effective OI, with a specific focus on Fuzzy Front-End public-sector innovation	Public sector entities should engage with the formalization of clear and compelling guidelines, stimulate a nurturing institutional environment, nourish inter-organizational relationships, and create appropriate boundary spanning appointments to overcome obstacles and barriers to OI	Purple	25
Yang Z., Kankanhalli A.	Innovation in government services: The case of open data	2013	Conference Paper	IFIP Advances in Information and Communication Technology	N/A	N/A	The article intends to shed light on the reasons and factors that inhibit the stakeholders' interest to innovate using open data	Bad data formats, disruptions in timely release of public data, and lack of data granularity represent major shortcomings preventing the stakeholders' willingness to use public open data	Purple	38

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Table A1.

Table A1.

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Zhang N., Zhao X., Zhang Z., Meng Q., Tan H.	What factors drive open innovation in China's public sector? A case study of official document exchange via microblogging (ODEM) in Haining	2017	Article	Government Information Quarterly	N/A	3	Embracing the Technology-Organization-Environment framework, the article explores the factors that drive OI	Alongside hard factors, such as the IT competences of public servants and stakeholders involved in OI, soft factors – including the support and commitment of top managers – are essential to enable public sector to fully exploit OI	Purple	33
Almirall E., Lee M., Majchrzak A.	Open innovation requires integrated competition-community ecosystems: Lessons learned from civic open innovation	2014	Article	Business Horizons	B	2	The authors compare the approaches taken by six cities opening their data for innovation, contrasting collaborative and competitive ways of organizing external sources	OI is effective when public sector entities balance the needs of the entire ecosystem in ways that foster competition and collaboration simultaneously	Red	81
Assar S., Boughzala L., Isckia T.	eGovernment trends in the web 2.0 era and the open innovation perspective: An exploratory field study	2011	Conference Paper	Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)	N/A	N/A	The contribution assesses the transformation potential associated with OI on e-government and envisions the development trends of innovative public services	The implications of OI on the development and implementation of new public services rely on the timely availability of open data, on a solid and robust institutional setting, and on interoperability of data and documents	Red	14

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Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Bekkers V.	Why does e-government look as it does? Looking beyond the explanatory explainability of the e-government concept	2012	Article	Information Polity	C	N/A	The article conceptually advances the distinctive role of OI in filling the emptiness of the e-government concept	The success of e-government is affected by the public sector entities' ability to establish a viable OI program, considering the stakeholders' ability and willingness to link and share ideas for co-creating value	Red	8
Chan C.M.L.	From open data to open innovation strategies: Creating e-services using open government data	2013	Conference Paper	Proceedings of the Annual Hawaii International Conference on System Sciences	N/A	N/A	The article investigates the strategies to facilitate organizations and citizens to use open government data and participate in public value generation	The creation of open government data portal is not enough to prompt public value co-creation: the emphasis should move beyond using public open data to promote co-production of valuable public services	Red	82

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Table A1.

Table A1.

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Charalabidis Y., Koussouris S., Ramfos A.	A cloud infrastructure for collaborative digital public services	2011	Conference Paper	Proceedings - 2011 3rd IEEE International Conference on Cloud Computing Technology and Science, CloudCom 2011	N/A	N/A	The article advances a structured model for enabling OI and participative development of public services exploiting the power of cloud computing	OI enables public sector entities to develop and implement innovative and sophisticated public services, achieving increased efficiency and effectiveness to meet the evolving expectations of the community through collaboration	Red	6
Cohen B., Almirall E., Chesbrough H.	The city as a lab: Open innovation meets the collaborative economy	2016	Article	California Management Review	A	3	The article advances the role of cities as drivers and catalysts of OI, engaging companies and citizens in boosting local growth and improving the quality of life	Public sector entities should arrange clear and compelling incentives to stimulate relevant stakeholders' participation in innovation ecosystems; a culture based on innovation and creativity should inspire public sector entities efforts to engage stakeholders in public value co-creation	Red	75

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Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Conradie P., Mulder L., Choenni S.	Rotterdam open data: Exploring the release of Public Sector Information through co-creation	2012	Conference Paper	2012 18th International Conference on Engineering, Technology and Innovation, ICE 2012 - Conference Proceedings	N/A	N/A	The article examines how the co-creation paradigm can be applied to public sector information release, stimulating ideas' exchange among stakeholders	Embracing a value co-creation perspective is understood as a precondition for implementing public information release on local level; clear identifiable incentives for participation should be set to encourage stakeholders' participation in value co-creation	Red	18
Davies G.H., Roderick S., Huxtable-Thomas L.	Social commerce Open Innovation in healthcare management: an exploration from a novel technology transfer approach	2019	Article	Journal of Strategic Marketing	A	2	The article investigates the policy context within which an OI approach based on collaboration across public sector entities, higher education institutions, and privately-owned companies generates significant opportunities for innovation in health care	Embracing an OI strategy may enable public sector entities to overcome barriers and issues inherited by conventional bureaucratic approaches, such as fragmentation, limited absorptive capacity, and rigidity	Red	5

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Authors	Title	Year	Document type	Source title	ABDC ranking	AJG ranking	Study aims	Main findings	Cluster	Cited by
Fernández-Zubieta A., Andujar-Nagore I., Giachi S., Fernández-Esquinas M.	New Organizational Arrangements for Public-Private Research Collaboration	2019	Article	Journal of the Knowledge Economy	C	N/A	The article investigates Cooperative Research Centres as a particular form of targeted OI, which is aimed at enacting an innovation ecosystem	OI efforts led by public sector entities are generally characterized by a limited involvement of privately-owned companies in the definition of strategic plans, as well as in the control and supervision of the innovation ecosystem	Red	6
Fu X., Mu R.	Enhancing China's innovation performance: The policy choices	2014	Article	China and World Economy	B	1	The study examines the policy choices implemented by the Chinese government in the extended national innovation performance framework to enact OI	Horizontal OI-oriented policies focusing on broader fields (e.g. education, R&D, and infrastructures) are more effective than selective ones in fostering the establishment of a viable and vivid innovation ecosystem; multiple stakeholders should be involved in OI to develop the set of capabilities, incentives, and institutions required to boost innovation performance	Red	10

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Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Fuglsang L.	Capturing the benefits of open innovation in public innovation: A case study	2008	Article	International Journal of Services, Technology and Management	N/A	N/A	The paper investigates how the public sector benefits from OI, shedding light on service development and innovation in the public sector	Public sector entities should take actions to get advantage of external ideas and OI, including strategic reflexivity, scaling up of innovative ideas, and encouraging continuous co-production	Red	32
Guerrero M., Urbano D.	The impact of Triple Helix agents on entrepreneurial innovations' performance: An inside look at enterprises located in an emerging economy	2017	Article	Technological Forecasting and Social Change	A	3	The study analyses the implications of the connections across enterprises, universities, and government on innovation performance	Linkages across companies, universities, and public sector entities facilitate the access to knowledge and funding opportunities, promoting the establishment of a vivid OI-based ecosystem	Red	77
Heimstädt M., Reischauer G.	Framing innovation practices in interstitial issue fields: open innovation in the NYC administration	2019	Article	Innovation: Management, Policy and Practice	C	N/A	The study adopts a field framing perspective to explain the use of OI strategies by public sector entities to advance innovation	OI is a viable alternative to the established innovation practices in the public sector; cultural resonance is conducive to an enhanced public sector entities' ability to take advantage of OI	Red	6

(continued)

Table A1.

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Hennala L., Parjanen S., Uotila T.	Challenges of multi-actor involvement in the public sector front-end innovation processes: Constructing an open innovation model for developing well-being services	2011	Article	European Journal of Innovation Management	C	1	The article investigates how the involvement of stakeholder groups in advancing public service production increases innovativeness	The cognitive diversity of stakeholders involved in OI is argued to increase the likelihood of new knowledge generation; moreover, it stimulates the emergence of new ideas	Red	32
Katsonis M., Botros A.	Digital Government A Primer and Professional Perspectives	2015	Article	Australian Journal of Public Administration	A	2	The article examines OI as an innovative approach intended to enable public administration reforms and advance the effectiveness and efficiency of public services	OI is typically handled as a strategic management tool, which is intended to enable public sector entities to tap into resources that are not available in the public realm	Red	26

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Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Lee J.N., Ham J., Choi B.	Effect of Government Data Openness on a Knowledge-based Economy	2016	Conference Paper	Procedia Computer Science			The article illustrates the implications of government data openness on a knowledge-based economy at the national level	The openness of government data has positive effects on the generation of a valuable knowledge bases, boosting firms' competitiveness at the individual and collective levels; alongside enabling the access to data, public sector entities should provide stakeholders with opportunities to create knowledge and generate new ideas	Red	15

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Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Lee S.M., Hwang T., Choi D.	Open innovation in the public sector of leading countries	2012	Article	Management Decision	B	2	The study investigates the state of the art of OI practices in the public sector of leading countries	OI enables public sector entities to exploit external ideas and resources to solve public management issues that fall outside their control; an integrative management approach is needed to engage public servants in interventions aimed at leveraging external resources and ideas	Red	181
Lee S.Y., Noh M., Seoul J.Y.	Government-led regional innovation: a case of 'Pangyo' IT cluster of South Korea	2017	Article	European Planning Studies	N/A	2	The paper investigates a regional innovation cluster, shedding light on the historical, institutional, and regional factors affecting the implementation of OI	Public sector entities should implement tailored strategic investment initiatives and should deliver continuous administrative support to relevant stakeholders, stimulating their participation to OI and advancing innovation performance	Red	5

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Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Mainka A., Castelnovo W., Miettinen V., Bech-Petersen S., Hartmann S., Stock W.G.	Open innovation in smart cities: Civic participation and co-creation of public services	2016	Conference paper	Proceedings of the Association for Information Science and Technology	N/A	N/A	The article discusses development in the field of public services co-creation and investigates the role of information science to set the conditions for OI	OI permits public sector entities to involve stakeholders in increasing the value of public open data, facilitating their use for the design of value-added services	Red	17
Martins T.C.M., de Souza Bermejo P.H., de Souza W.V.B.	Open innovation for citizen coproduction	2015	Conference Paper	Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Biominformatics)	N/A	N/A	The article reviews the interplay between ideas crowdsourcing and coproduction of innovations to enact OI in the public sector	Ideas crowdsourcing is conducive to OI; it drives the re-emergence of service coproduction and solicits the transformation of people from passive consumers to active citizens who are engaged in solving social problems	Red	6
Mergel I.	Open innovation in the public sector: drivers and barriers for the adoption of <a href="http://Challenge.gov">Challenge.gov</a>	2018	Article	Public Management Review	A	4	The research intends to discover and examine the intra-, inter-, and extra-organizational factors driving or hindering OI in the public sector	OI is facilitated by the alignment between the mandate of the innovation policy and the mission of public sector entities; however, system-inherent barriers prevent OI from a procedural and technological perspective	Red	56

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Table A1.

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Mergel I.	Opening Government: Designing Open Innovation Processes to Collaborate with External Problem Solvers	2015	Article	Social Science Computer Review	N/A	N/A	The article systematizes government crowdsourcing and peer-production initiatives, pointing out the phases of the OI process	OI generally unfolds through 4 steps including: 1) idea generation, 2) idea incubation, 3) idea validation, and 4) idea implementation; stakeholders' participation in such process is stimulated through monetary and non-monetary rewards	Red	59
Mergel I., Bretschneider S.J., Louis C., Smith J.	The challenges of Challenge.gov: Adopting private sector business innovations in the federal government	2014	Conference Paper	Proceedings of the Annual Hawaii International Conference on System Sciences	N/A	N/A	The study defines the underlying concept of OI and applies it to the theory of publicness and public goods creation	Since changes in the public sector are initiated by a political mandate, OI can be primarily used to realize incremental changes or tweaks, avoiding disruptions in the delivery of existing services	Red	20

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Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Mergel I. Desouza K.C.	Implementing open innovation in the public sector: The case of <a href="http://Challenge.gov">Challenge.gov</a>	2013	Article	Public Administration Review	B	4*	The article highlights the organizational barriers that public managers encounter during the implementation process of OI	The main challenges related to the implementation of OI for public value co-creation entail: 1) attracting attention and encouraging participation through incentives; 2) facilitating the establishment of communities of practice; and 3) retaining stakeholders in OI initiatives	Red	166
Molinari F.	Living Labs as multi-stakeholder platforms for the eGovernance of innovation	2011	Conference Paper	ACM International Conference Proceeding Series	N/A	N/A	The article explores Living Labs as territorial policy instruments for stimulating OI in rural areas	Living labs can be conceived of as PPPPs and multi-stakeholder platforms, which enact an infrastructure for user-centric OI living a life of its own	Red	8
Niehaves B.	Open process innovation: The impact of personnel resource scarcity on the involvement of customers and consultants in public sector BPM	2010	Article	Business Process Management Journal	B	2	The study investigates the implications of OI on process innovation, examining how resource scarcity affect innovation performance	Personnel resource scarcity has been found to hinder the implementation of OI initiatives aimed at process innovation	Red	42

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Table A1.

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Scotto V., Ferraris A., Bresciani S.	Internet of Things: Applications and challenges in smart cities: a case study of IBM smart city projects	2016	Article	Business Process Management Journal	B	2	The article addresses the combination between Internet of Things (IoT) and OI, investigating how it affects the development of urban areas and firms' innovativeness	OI is expected to bridge the gap between the IoT push and the urban policy pull in demand-driven cycles of experimentation, fostering innovation performance at the individual and collective levels	Red	152
Seidel C.F., Thapa B.E.P., Plattfaut R., Niehaves B.	Selective crowdsourcing for open process innovation in the public sector - Are expert citizens really willing to participate?	2013	Conference Paper	ACM International Conference Proceeding Series	N/A	N/A	The article analyses the willingness of citizens to participate in crowdsourcing for innovation to enrich theory and practice in the field of collaborative innovation	Expert citizens are more willing to be involved in OI initiatives aimed at coping with public management challenges; tailored incentives should be crafted to motivate and engage non-expert citizens	Red	8
Van der Duin P., Heger T., Schlesinger M.D.	Toward networked foresight? Exploring the use of futures research in innovation networks	2014	Article	Futures	B	2	The article examines how innovation networks and foresight are associated, focusing on the latter type, scope, and role	OI enacts networked foresight, which expands the resource base available and engages a diversified pool of stakeholders in efforts aimed at public value generation	Red	33

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Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Venturini K., Verbano C.	Open innovation in the public sector: Resources and performance of research-based spin-offs	2017	Article	Business Process Management Journal	B	2	The study deals with the OI phenomenon, investigating how technological, human, social, and financial resources are systematized to accomplish boundaryless innovation	Making it possible to share the costs and risks of innovation with external partners, OI boosts the public sector entities' access to new ideas and knowledge, overcoming the constraints which affect the action of public sector organizations	Red	9
Zheng C., Hu M.-C.	An exploration of the application of universities as artificial institutional entrepreneurs: The case of China	2018	Article	Journal of Public Affairs	B	1	The article examines the nature of government-university-industry links and attempts to apply the concept of "institutional entrepreneurship" to universities	Relying on universities, public sector entities are able to explore the frontier of knowledge development and exploitation, advancing technology transfer through an OI approach	Red	4

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Table A1.

Table A1.

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Zimmermann H.-D., Puchhar A.	Open innovation, open data and new business models	2015	Conference Paper	IDIMT 2015: Information Technology and Society - Interaction and Interdependence - 23rd Interdisciplinary Information Management Talks	N/A	N/A	The study investigates how data made publicly accessible represent a basis for the generation of public value	Privately-owned companies and entrepreneurs are expected to benefit from public open data, collecting insights on innovative services and products which meet with the evolving expectations of customers and generate increased value for the community	Red	12
Ahn J.M., Lee W., Mortara L.	Do government R&D subsidies stimulate collaboration initiatives in private firms?	2020	Article	Technological Forecasting and Social Change	A	3	The study examines if and how government Research and Development subsidy play a vital role in forming a desirable technological progress, with a specific focus on OI	The study findings cast a shade on the implications of state subsidies for innovation collaboration. The effects of state subsidy on the effectiveness of OI follow non-linear, inverted U-shaped path: hence, policy makers should arrange sophisticated strategies and tools to promote OI	Yellow	15

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Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Cano-Kollmann M., Hamilton R.D., Mudambi R.	Public support for innovation and the openness of firms' innovation activities	2017	Article	Industrial and Corporate Change	A	3	The study empirically investigates the relationship between publicly funded schemes to support innovation and the degree of openness of privately-owned companies' innovation practices	Institutions and government policies have been argued to play a more important role than money in fostering OI when policy makers face budgetary constraints	Yellow	37
Cheah S.L.-Y., Ho Y.-P.	Effective industrial policy implementation for open innovation: The role of government resources and capabilities	2020	Article	Technological Forecasting and Social Change	A	3	The study investigates the characteristics and implications of government support in the form of technology transfer project funding that aims to encourage firms to participate in OI	Alongside providing technology and funds to relevant stakeholders, public sector entities should develop adequate capabilities to effectively deploy Industrial Policy programmes and fully exploit OI	Yellow	12
Gershman M., Roud V., Thurner T.W.	Open innovation in Russian state-owned enterprises	2019	Article	Industry and Innovation	B	3	The study investigates the role of Russian State-Owned Enterprises (SOE) in promoting open innovation	In spite of the SOEs' tendency to become more deeply involved in OI, it is still handled as a complementary innovation activity	Yellow	6

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Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Jugend D., Fiorini P.D.C., Armellini F., Ferrari A.G.	Public support for innovation: A systematic review of the literature and implications for open innovation	2020	Article	Technological Forecasting and Social Change	A	3	The article assesses what types of public practices for innovation comprise the terms "public support for innovation" and "government support for innovation" and their relationship with OI	Four dimensions have been developed to describe the public support for OI, namely: (i) financial support for R&D activities; (ii) development through innovation; (iii) support for sectorial programs; and (iv) university-industry-government collaboration (triple helix)	Yellow	14
Jugend D., Jabbour C.J.C., Alves Scaliza J.A., Rocha R.S., Junior J.A.G., Latan H., Salgado M.H.	Relationships among open innovation, innovative performance, government support and firm size: Comparing Brazilian firms embracing different levels of radicalism in innovation	2018	Article	Technovation	A	3	The article investigates the relationship among OI, innovative performance, and government support for innovation in two different samples, which relate to incremental innovation and radical innovation	State support has been found to play a clear effect on innovation. Non-monetary support (e.g. facilitating networking and coordinating collaboration) may be more effective in enabling OI and improving industrial competitiveness	Yellow	46

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Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Leckel A., Veilleux S., Dana L.P.	Local Open Innovation: A means for public policy to increase collaboration for innovation in SMEs	2020	Article	Technological Forecasting and Social Change	A	3	The study calls for the arrangement of practical policy instruments intended to establish local OI ecosystems	Public sector entities should promote localized trust, which pinpoints the networking of industry-, research- and public-sector organizations; it facilitates the access to external knowledge, while at the same time establishing a diverse regional innovation ecosystem	Yellow	31
Orlando B., Bailestra L.V., Magni D., Ciampi F.	Open innovation and patenting activity in health care	2021	Article	Journal of Intellectual Capital	B	2	The study investigates the relationship between OI and intellectual property in the field of health care	Effective OI relies on high public expenditures. OI is the most suitable model for the health industry, improving innovation performance and intellectual capital	Yellow	9
Zhang D., Li S., Zheng D.	Knowledge search and open innovation performance in an emerging market: Moderating effects of government-enterprise relationship and market focus	2017	Article	Management Decision	B	2	The article investigates the interplay between knowledge search and OI performance in light of appropriability hazards in emerging markets	OI is boosted by positive relationships between privately-owned companies and public sector entities, which can unleash innovation efforts by protecting the results achieved through OI	Yellow	11

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Table A1.

Authors	Title	Year	Document type	Source title	ABDC ranking	AIG ranking	Study aims	Main findings	Cluster	Cited by
Zheng F., Jiao H., Cai H.	Reappraisal of outbound open innovation under the policy of China's 'Market for Technology'	2018	Article	Technology Analysis and Strategic Management	B	2	The study investigates China's 'Market for Technology' policy, examining the transferring effects of Multinationals' outbound OI in this specific context	The combination of the government's trend to improve institutional arrangement and the privately-owned companies' trend to outbound OI paves the way for increased opportunities for boundaryless collaboration	Yellow	6

Note(s):  $N = 94$

Source(s): Authors' own creation

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