

# The evolution of integrated popular financial reporting: toward a digital-driven collaborative approach using sentiment analysis tool

Integrated  
popular  
financial  
reporting

Received 6 November 2023  
Revised 12 January 2024  
Accepted 23 February 2024

Paolo Biancone

*Department of Management, University of Turin, Turin, Italy*

Valerio Brescia

*Department of Management, University of Turin, Turin, Italy and  
Department of Management, Spoleczna Akademia Nauk, Lodz, Poland*

Federico Chmet

*Department of Management, University of Turin, Turin, Italy, and*

Federico Lanzalonga

*Department of Management, University of Turin, Turin, Italy and  
Department of Management, Spoleczna Akademia Nauk, Lodz, Poland*

## Abstract

**Purpose** – The research aims to provide a longitudinal case study to understand how digital transformation can be embedded in municipal reporting frameworks. The central role of such technology becomes increasingly evident as citizens demand greater transparency and engagement between them and governing institutions.

**Design/methodology/approach** – Utilising a longitudinal case study methodology, the research focusses on Turin's Integrated Popular Financial Report (IPFR) as a lens through which to evaluate the broader implications of digital transformation on governmental transparency and operational efficiency.

**Findings** – Digital tools, notably sentiment analysis, offer promising avenues for enhancing governmental efficacy and citizenry participation. However, persistent challenges highlight the inadequacy of traditional, inflexible reporting structures to cater to dynamic informational demands.

**Practical implications** – Embracing digital tools is an imperative for contemporary public administrators, promoting streamlined communication and dismantling bureaucratic obstructions, all while catering to the evolving demands of an informed citizenry.

**Originality/value** – Different from previous studies that primarily emphasised technology's role within budgeting, this research uniquely positions itself by spotlighting the transformative implications of digital tools during the reporting phase. It champions the profound value of fostering bottom-up dialogues, heralding a paradigmatic shift towards co-creative public management dynamics.

**Keywords** Integrated popular financial report, Collaborative governance, Dialogic accounting, Digital technology, Longitudinal case study

**Paper type** Case study

© Paolo Biancone, Valerio Brescia, Federico Chmet and Federico Lanzalonga. Published by Emerald Publishing Limited. This article is published under the Creative Commons Attribution (CC BY 4.0) licence. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this licence may be seen at <http://creativecommons.org/licences/by/4.0/legalcode>

**Conflict of interest statement:** This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.



## 1. Introduction

Digital transformation and technologies can disrupt organisations and increase whole-system efficiency (Hinings *et al.*, 2018). Notably, the public sector can benefit from digital technologies, using digital tools to support citizens by providing quality services and a higher standard of living (Todoruț and Tselentis, 2018). Among the advantages of using technology for public institutions is the delivery of online services, which enables reaching a more significant number of users while facing challenges such as user engagement, planning, control, and costs (Agostino *et al.*, 2021). The values pursued by introducing digital technology are increased transparency, improved efficiency, and more effective communication with users to engage citizens in the decision-making system (Mora and Deakin, 2019). Consequently, the evidence appears consistent with the purposes of the emerging approach to public management (Denhardt and Denhardt, 2015). Nonetheless, the study by Galić *et al.* (2017) critically highlights the use of new technologies such as social media and real-time big data as applied to a surveillance-based capitalism approach with a departure from real needs by anticipating and monetising the requested service or good, even in the public sphere.

However, according to Bryson *et al.* (2014), among the key objectives of government and public administration is creating public value so that what the public cares most about is addressed effectively. The theoretical model of collaborative governance emphasises the importance of participatory inclusiveness and transparency in institutional design (Ansell and Gash, 2008). This type of governance implies that the emphasis is on collective decision-making, not involving an individual making a decision, but rather groups of individuals or organisations or systems of organisations making decisions (Stoker, 2004). Contribution to democratic and collaborative decision-making is developed through dialogue and responds to active citizenship in pursuit of community values (Bryson *et al.*, 2014). Hence, the result of the study is new forms of government that are more collaborative than in the past (Allen *et al.*, 2005). The actors of change are recognised as political administrators, public managers, and citizens (Bouckaert and Van de Walle, 2003).

However, the willingness of intent among the actors does not always seem to be common. Politicians address citizen participation as a value that can amplify consensus (Migchelbrink and Van de Walle, 2021). Citizens would like to be recognised as an integral part of meeting the information (Arnstein, 1969; Haustein and Lorson, 2021). On the other hand, public managers are reluctant to embrace change, perceiving it as an increase in bureaucracy and time consuming spent on relations with each administrative area (Yang and Callahan, 2007). Through technology it is possible to improve government efficiency by modernising systems to achieve more responsive and inclusive governance (Gilman, 2017). The dissemination of financial and non-financial information through digital technology tools enables greater citizen participation in decision-making (Kozłowski *et al.*, 2018; Secinaro *et al.*, 2021a, b).

Consequently, the dialogic approach exposes the values and assumptions to new ones, allowing all actors to recognise reality by facilitating a social redefinition of various public aspects, promoting hermeneutically rational decision-making, facilitating dialogue between stakeholders, ensuring accountability of those involved in the process, encouraging individuals to discuss social practices, and increasing the possibility of interpreting information (Brown, 2009). In exploring the dynamics of financial and non-financial reporting, several studies emphasise the importance of managerial directives and integrated reporting quality in improving stakeholder engagement, with positive moderating effects of corporate social responsibility (Chouaibi *et al.*, 2022; Imen and Anis, 2021). Further investigations of French companies revealed that reporting quality mitigates inefficiencies related to information needs and that governance can drive change through established reporting processes (Houcine *et al.*, 2022). In addition, an organisation's non-financial dimensions directly impact financial sustainability, suggesting an integrated framework to

---

be explored in the future (Crous *et al.*, 2022). In a public management context, among the different types of social reporting capable of involving all actors by placing the citizen at the centre of the decision-making process (Biondi and Bracci, 2018), Integrated Popular Financial Reports (IPFR) or Popular Reports are the main ones that best suit informational needs, change, and accounting by associating the tool with new disruptive technologies (Grossi *et al.*, 2021). Specifically, the IPFR has already been considered a dialogic accounting tool (Grossi *et al.*, 2021).

The introduction of digital technologies in public administration has different benefits (Kozłowski *et al.*, 2018; Secinaro *et al.*, 2021a, b). It promotes the participation of a vast pool of citizens, leverages technologies to improve communication, facilitates the transmission of information in accessible formats, and can provide a deliberative process based on the broad majority (Macintosh, 2004).

If it aims to stimulate collaboration, digital technology can be a tool for dialogic accounting when it integrates transparency, participation, and collaboration (Chen and Chang, 2020). New technologies are directly associated with economic and social change and focus on new positive and negative phenomena linked to digitisation and disruptive technologies (Cortés-Cediel *et al.*, 2021; Wang *et al.*, 2021).

However, the literature is not unanimous regarding useful technologies in public accounting, so this study aims to investigate the gap related to the use of big data and social media-generated networks as an information and decision-making tool (Arnaboldi *et al.*, 2017). According to Aleksandrov *et al.* (2018), dialogic accounting using digital technologies has already been considered to explore participatory budgeting. In this view, dialogue appears as a tool to promote and improve the democratisation process (Brown, 2009). On the one hand, the crucial role of technology in reporting appears helpful to validate the ability to account for benefits that risk being under-reported (Merli and Bonollo, 2014). Conversely, digital innovation unveils the dichotomous nature of digital transformations (Wang *et al.*, 2021). Even considering that digital technologies have become equally accessible to all socio-economic groups (Mihelj *et al.*, 2019), there is no evidence that everyone uses them to access public information and to engage in dialogue and discussion as part of reporting. In this sense, social media can stimulate debate among citizens. However, they are likely to reinforce power differentials and reduce the quality of communication between the government and the citizenry (Piccorelli and Stivers, 2019). Initially, the digital debate considered barriers to access and use of technologies, viewing access to hardware, software, Internet, and cell phones as barriers (DiMaggio *et al.*, 2004; Zillien and Hargittai, 2009). Today, the debate focuses on the informed use and possession of skills and knowledge to use technologies and properly increase participation (Van Dijk, 2017).

Therefore, this study aims to leverage a longitudinal case study related to the IPFR of the city of Turin to understand if digital transformation is a conducive element to dialogic accounting in reporting and answer the following research question:

*RQ.* How does digital transformation applied to reporting enable or hinder government and public sector transparency?

The application of a longitudinal case study allowed the authors to analyse the change in decision-making stimulated through dialogue (Grossi *et al.*, 2021). The object of study is the City of Turin, which has been expanding its citizen participation through dialogue with citizens since 2009 (Tanda *et al.*, 2017). Turin has been a Smart City since 2009, joining the Covenant of Mayors and approving the Sustainable Energy Action Plan in 2010. This governmental paradigm shift makes the city a generalisable case study due to the technological and organisational aspects of improving governance (Secinaro *et al.*, 2021a, b).

The scenario observed in two different moments allowed an understanding of the change in city participation. At first, the interaction on social media did not appear able to show the

---

information requested by citizens. Through participatory reporting stimulated by digital technologies in the perimeter of dialogic accounting, it was possible to respond to citizens' information needs and lead toward a change in governance approach. The results of the research show less reluctance of public managers toward openness to participation in reporting. Digital technology has made it possible to overcome bureaucratic limitations by extending communication and creating an effective bottom-up system.

Important implications emerged. First, the paper shows how digital technology enables bureaucratic decision-making barriers to be overcome by simplifying the information selection process. Next, it contributes to the ongoing debate on dialogic accounting in reporting by validating the use of digital technologies (Grossi *et al.*, 2021). Finally, the study contributes to the theory of collaborative governance by looking at digital technology as a thread to combine it with dialogic accounting (Coleman and Cardoso Sampaio, 2017; Wijaya *et al.*, 2019).

The structure of this paper consists of several sections. First, the introductory section will be followed by a literature review section. Then, the methodological approaches employed to obtain the results will be discussed. Following that, the discussion section will integrate both theoretical and practical implications. Lastly, the conclusion will address the research's limitations and suggest future avenues.

## 2. Literature review

### 2.1 *The role of digital transformation in the reporting of municipalities*

Cities represent an increasingly thriving environment for applying technologies (Parida *et al.*, 2019). By leveraging relationships between local governments, private agencies, and other community groups, collaboration among stakeholders can pull local communities toward the Smart City concept (Wijaya *et al.*, 2019). However, public administrations do not always emerge successful in implementing digital innovations and technologies, even in the smart city context (Ferraris *et al.*, 2020). Three research strands divide the literature: technology, human resources, and governance (Newman *et al.*, 2004). Regarding governance, it seems appropriate to highlight the relevance of innovation to address the needs of differentiated policies (Gil-Garcia, 2012). According to Secinaro *et al.* (2021a, b), introducing digital technologies in public administration encourages participation in collective decision-making. In this context, the definition of smart governance involves an administrative function coordinating many components of the smart city (Tomor, 2019). Furthermore, several supranational entities have been actively involved in increasing digitisation in public organisations and providing citizens with more non-financial information (European Commission, 2020; United Nations, 2015).

Therefore, through participation in decision-making and implementing collaborative tools, citizens help facilitate the exchange, leading to informed decisions (Arnaboldi *et al.*, 2017; Bifulco *et al.*, 2016). According to Mora *et al.* (2019), citizen involvement needs to be stimulated through tools that encourage active participation. Leveraging technologies that enhance communication accomplishes the goal of conveying information in accessible formats to lead to a bottom-up deliberative process (Fliervoet *et al.*, 2016; Macintosh, 2004).

On the one hand, digital transformation is a strategic process through which organisations use digital technology to revolutionise their business processes, enhance efficiency, and offer new products and services to end-users (de Bem Machado *et al.*, 2021). On the other hand, digital technologies can potentially encourage the deployment and representation of key elements to ensure transparency and citizen participation (Desdemoustier *et al.*, 2019; Nam and Pardo, 2011). These assumptions allow for considering effects directly related to economic and social change by focussing on new

---

positive and negative phenomena related to digitisation and disruptive technologies (Cortés-Cediel *et al.*, 2021; Wang *et al.*, 2021). Numerous studies have focused on the role of digital technologies in implementing participatory budgeting. Through technology, citizens can transmit their knowledge and experience (Coleman and Cardoso Sampaio, 2017; Secinaro *et al.*, 2022). Specifically, the revolution that followed the spread of the Internet has allowed an increasing number of people to allocate public investments actively (Matheus *et al.*, 2010). According to Alfaro *et al.* (2010), this innovation has led from participatory budgeting to e-participatory budgeting. Although the topic has been enthusiastically addressed (West, 2004), useful tools to improve citizens' perceptions of government effectiveness and democratic responsiveness are not yet emerging (Malodia *et al.*, 2021). Implementing citizen participation through technology defines the meaning of e-government, which is constantly evolving in the literature. Initially, the term defined government attempts to serve citizens electronically (Ho, 2002). The concept has evolved in the sense of reinventing the public sector using Information and Communication Technologies (ICT), transforming its operations and interrelationships with the community (Ndou, 2004). Nowadays, a recent definition describes e-government as socially inclusive, hyper-integrated ICT platforms built with evolutionary systems architecture to ensure efficient delivery of government services ensuring transparency, reliability, and accountability (Khanra and Joseph, 2019; Malodia *et al.*, 2021). In this context, digital technology can be a dialogic accounting tool when integrating transparency, participation, and collaboration (Chen and Chang, 2020; Grossi *et al.*, 2021).

Several studies address participatory budgeting steps by involving the citizen in making decisions. However, few studies support reporting made with a truly informative dialogic process to support citizen allocation of resources (Secinaro *et al.*, 2021a, b). Social media allowed a dialogical approach to reporting creation, although it does not map the change process between actors' communication processes (Bracci *et al.*, 2015; Grossi *et al.*, 2021). Through social media, it is possible to involve the citizenry in the decision-making process. In the early days of studies on the topic, the literature argued that Web might not adequately show consensus nor allow disagreement to emerge (Cammaerts, 2008). Indeed, dialogic tools are still used unidirectionally, leading citizens and governments away from public relations based on two-way dialogue (Kent and Taylor, 1998). To be a source of dialogue between citizens and government, social media need to have characteristics of inclusiveness, accountability and democracy (Feeney and Porumbescu, 2021). Social networks are usually free platforms, which require a device, Internet access, digital literacy and payment through personal information (Wahyunengseh *et al.*, 2020). Firstly, social media can represent an opportunity to increase participation and flexibility while remaining proprietary platforms without constraints related to political and social inclusivity (Wachhaus, 2017). In addition, social media users provide a lot of information about personal preferences, and advertising campaigns, which are the basis of platforms' revenues, can potentially manipulate their behaviour. This addresses the second issue associated with accountability (Persily, 2017). Another critical point is the government's ability to use social media tools to promote democratic outcomes, considering that government accounts do not hold special rights or privileges (Feeney and Porumbescu, 2021).

The participatory process of resource allocation is called participatory budgeting. It allows citizens to identify spending priorities for public interest projects by placing them within budgeting-related empowerment (Cabannes, 2004). Numerous studies in the literature addressed this specific topic, consequently it appears to be already conceptualised. In contrast, there is still a need of studies that support the kind of process change driven by technologies to support reporting practices, the cognitive basis of the democratic process before informed resource allocation (Desdemoustier *et al.*, 2019; Secinaro *et al.*, 2021a, b).

## 2.2 From collaborative governance to dialogic accounting

Traditionally, the concept of governance dates back to the 1960s, when several scholars expanded their studies of intergovernmental cooperation (Agranoff and McGuire, 2003; Elazar, 1962). Over time, governance has been the subject of numerous theoretical studies and influences (Morse, 2011). Governance has been observed concerning the Logic of Collective Action (Olson, 2012) and game theory (Smith, 1984). From a modern perspective, the linkage related to the vast literature on common resources that considers governance as a dimension of jointly determined norms and rules to regulate individual and group behaviour is worthy of attention (Ostrom, 1990). According to Emerson *et al.* (2012), collaborative governance for public administration defines the decision-making and public policy management structures that can constructively engage citizens by overcoming public agency barriers, levels of government, public, private and civic spheres to achieve a public purpose that could not otherwise be realised. The definition allows collaborative governance as a theoretical lens to analyse the structural importance of participatory inclusiveness and transparency in institutional design (Ansell and Gash, 2008). The underlying theory implies that we emphasise effectiveness in collective decision-making through groups of individuals or organisations that stimulate contributions to decisions (Stoker, 2004). Active citizenship in pursuit of public value must be built democratically and collaboratively, pushing toward more collaborative forms of government than in the past (Allen *et al.*, 2005; Bryson *et al.*, 2014). Embedded within collaborative governance processes are identified relationships between administrators, public managers, servants, and citizens (Bouckaert and Van de Walle, 2003). Together, all of them represent the primary actors in collaborative governance and define the scope of information exchange (Brescia, 2020). Information and perceptions of policy seem to influence both managers and citizens, shaping their relationship as it evolves through information exchange in the outcomes-performance process (Bracci *et al.*, 2014; Vigoda-Gadot and Meisler, 2010). However, the reluctance of public managers and employees regarding citizen participation remains a barrier to change (Yang and Callahan, 2007).

The literature highlights numerous case studies related to collaborative governance. Researchers have considered how collaboration improves performance by analysing the collective decision-making process for environmental licensing (Ulibarri, 2015). A further case study investigated collaborative governance as an engine for consensus building to achieve law reform, with shared responsibilities among elected officials, private and professional stakeholders, and ordinary citizens (Scott, 2011).

Despite these considerations, there continue to be problems related to power imbalances and the search for tools that can involve participants more closely in decision-making processes (Purdy, 2012). Accounting approaches can encourage democratic debate and consider the opposing positions of different groups and the information needs of all stakeholders (Thomson and Bebbington, 2004). In this vein, dialogic accounting allows the adoption of techniques that enable citizens to participate in defining and constructing reality rather than discussing what is already known (Aleksandrov *et al.*, 2018). The characteristics of dialogic accounting have been discussed and implemented over time. This paper based on the studies proposed by Brown (2009) proposed, who describes dialogic accounting from 8 perspectives. The author considers the recognition of multiple ideological orientations, avoiding monetary reductionism, openness about the subjectivity and contestable nature of calculations, enabling access for non-experts, ensuring an effective participatory process, attention to power relationships and their dynamics, recognising transformative potential, resisting new forms of monologism. Given these characteristics, the dialogic approach to accounting encourages individuals to discuss social practices and increases the diverse interpretations of information (Brown, 2009).

Since the diffusion of dialogic accounting, researchers have conducted studies to analyse the relevance of reporting tools with the characteristics that allow citizens to be part of the

---

decision-making process (Biondi and Bracci, 2018). According to Grossi *et al.* (2021), IPFRs can be considered dialogic accounting tools that can meet the information, change and reporting needs by integrating new disruptive technologies.

### 3. Methodology

#### 3.1 *Research setting and case study selection*

The study of the role of digital transformation in the reporting of municipalities informed by the theoretical lenses of collaborative governance and dialogic accounting requires a context that would allow for the analysis of an organisation in which the process of preparing the Integrated People's Report was already rooted. According to Siggelkow (2002, 2007), the case study must have unique characteristics that can inspire new ideas and contribute to the literature. The City of Turin has several factors that make it suitable for this purpose. First, since 2010, the city of Turin has been particularly active in developing a dialogue system with its stakeholders through the adherence to the Covenant of Mayors and, in 2010, with the approval of the Action Plan for Sustainable Energy. The official Smart City candidacy came in 2011 (Tanda *et al.*, 2017). Since 2011, the City has promoted numerous initiatives for participation in European and national tenders aimed at launching research, technological development, and innovation projects related to the theme of smart cities until 2013, when the Torino Smart City Foundation and the Municipality launched the strategic planning process through the "SMILE-Smart Mobility Inclusion Life and Health and Energy" project. The initiative, which lasted five months, was coordinated by the Torino Wireless Foundation and led to the development of the Turin Smart City Masterplan. Since 2020, it has launched a series of projects to transform the city's different elements into a smart city. The policies adopted over the years highlight the primary objective of informing, involving, and mobilising the community, resident citizens, associations, and public and private organisations to develop an effective action plan in cooperation with the European Commission. Therefore, the case study is significant and represents a generalisable example of smart administration regarding governance and experiments that are changing the technological, organisational, and governance aspects (Secinaro *et al.*, 2021a, b). In 2014/2015, the City initiated a citizen engagement process to develop Turin's first Popular Financial Report. This aimed to address the needs of city policies by analysing activities through the perspective of transparent administration. The project has seen the evolution of IPFR and the evolution of the systems of representation of information needs. In 2021, with the support of researchers from the Department of Management at the University of Turin, the main internal decision-makers of the administration (politicians and public managers) were involved in the adoption of new technologies for the information-gathering process, aimed at facilitating changes in governance, reporting, and dialogue tools. The change-oriented process to the use of technologies in collecting the need had already started in 2020.

#### 3.2 *Research data and design*

This section outlines a qualitative approach to explore digital transformation in the context of IPFR for municipalities. The longitudinal case study aims to investigate the implications of this process through the theoretical framework of collaborative governance assisted by dialogic accounting (Lanzalonga *et al.*, 2023; Secinaro *et al.*, 2023). Gummesson (2006) observes that qualitative management research deals with new variables and complex processes in social contexts. With practical evidence from a unique case study, this method focuses on the specific business entity in question, addressing the "how" of the phenomenon in line with the objectives of this research. Consequently, the authors defined the research design based on the objectives, using the theoretical framework provided by the literature

review (Eisenhardt, 1989). The single case study, of international significance, was considered a qualitative and exploratory approach to studying this phenomenon (Yin, 2004).

Moreover, Aleksandrov *et al.* (2018) stated that qualitative analysis of individual case studies represents a consistent approach to studying the adoption of dialogic accounting. Moreover, the method is already used when the authors acting as observers have had the opportunity to collect rich data using internal sources to go deeper into the municipal environment (Grossi *et al.*, 2021). The compound approach intends to use three different interpretation keys to propose a holistic analysis based on the selected case study (Yin, 2009). Qualitative research in the management field allows researchers to capture several intangible factors that value the literature (Babaeinesami, 2019; Camilleri, 2020). Primarily, researchers employed the “Talkwalker” tool based on algorithms designed in Social Data Intelligence (SDI), which allows to analyse the attitudes of a group of people on activities and policies of the municipality by testing and exploring both possibilities (Piotrowski *et al.*, 2019). The social search can aggregate many metrics related to the extracted data into a single dashboard. The tool helps to guarantee people’s engagement on a particular topic, identify the most used hashtags, create tag clouds, infer critical Key Performance Indicators (KPIs) useful for managerial decisions, and analytically improve the targeting of advertising campaigns. The tool can capture and summarise expressed preferences, analyse time series, optimise resources, design plans, predict trends, prepare reports, decrease reputational risks, analyse stakeholder attitudes, and solve problems using big data (Lytras *et al.*, 2017; Troisi *et al.*, 2018). Information was collected from various online sites, including Twitter, Instagram, blogs, forums, Google+, online newspapers, Pinterest, YouTube, and others, over 12 months basing on Artificial Intelligence approach (Caratù *et al.*, 2023). The tool fits the research questions as it enables the bottom-up approach, a crucial element in conducting dialogic accounting (Brown and Dillard, 2015). The first phase of analysis of the citizens’ perception led to the identification of the year of the most significant data regarding the type of information provided by the activity and municipal sector active in communication with citizens. The analysis revealed the communication style used by the administration via social media technologies. It showed the nature of information shared publicly and recorded internally in various one-way communication documents. This led to a shift in the administration’s approach. The authors conducted a semi-structured interview with eleven key actors (politicians, managers, and civil servants) to define progressive change. Specifically, the process involved three politicians in drafting the IPFR, each of whom share their legislative experience to shaping the framework. Alongside them, interviews were conducted with five managers who played key operational roles, overseeing the meticulous collection and supervision of information to ensure its accuracy and completeness. In addition, three civil servants who were responsible for ensuring an efficient flow of communication were interviewed; they do not only gather information but were also skilfully trained to manage and address critical issues inherent in the activity, ensuring smooth execution and compliance with established standards.

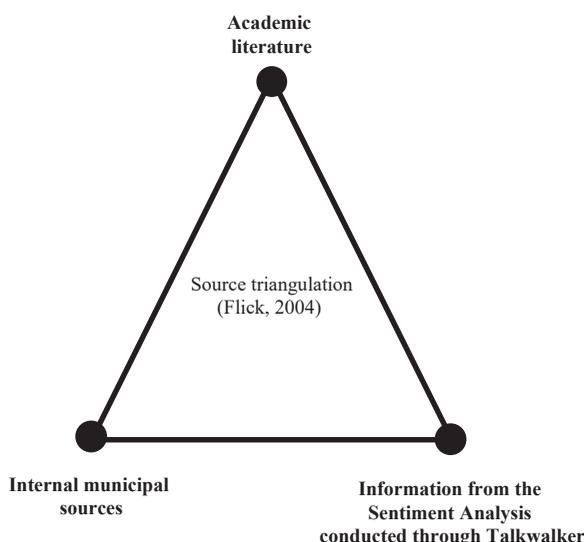
Following the entire process, the analysis was conducted for one year until the report was published, as described in Table 1.

Data	Description
Monitoring period	12 months (from 2019 to 2021)
Number of interviewees	11
Duration of interviews	1.485 min
<b>Source(s):</b> Authors’ elaboration	

**Table 1.**  
Case study data, focus  
on interviews

According to Longhurst (2003), the qualitative method expands knowledge because it enables the interviewer to go beyond the structure of the questions. Through the methodology, information collection does not occur under a rigid formula as in the structured interview (Hannabuss, 1996). At the same time, the type of communication and the information evidence extracted at the end of the internal governance change process were mapped using data provided by Talkwalker. This evidence demonstrated continuity in the scientific dialogical accounting process facilitated by the administration in the IPFR. As it has previously been used to assess the effects of technology (Dadzie et al., 2018), the methodology appears valid for exploring the effectiveness of digital technologies in stimulating dialogue or assessing whether dialogic intent affects the use of technology. Two authors were involved throughout the process and observed the change first-hand by inspiring the approach without changing the behaviour and the interventionist approach. The adopted method allows access to meaningful research data and simultaneously, to validate the information collected through the adoption of new processes (Korhonen et al., 2020). Sutton et al. (2016) recommend combining research approaches in technology studies. The method will allow us to test the new process as part of the City of Turin's information collection. This step is crucial for comprehending how processes are structured and how they could potentially change (Miller and Crabtree, 1994).

As Baard and Dumay (2020) defined, the method invites researchers to engage with business stakeholders to map and test processes directly. Therefore, interventionist approaches provided the opportunity to observe the entire IPFR drafting process from the inside and assess the reliability of the semi-structured interviews. Figure 1 shows the elements that ensure the triangulation of sources for the whole case study analysis process. Data collection for the present research follows a source triangulation protocol that allows the phenomenon to be observed from different perspectives (Flick, 2004).



**Source(s):** Authors' elaboration consistent with Flick (2004)

**Figure 1.**  
Source triangulation

## 4. Empirical observations

### 4.1 The background

Turin is one of the most innovation-oriented cities in the Northwest of Italy, with over 848,000 citizens. Turin has been part of the European Smart Cities project since 2009, which rewards the most virtuous European cities in sustainable development among those of big size (Covenant of Mayors, 2010). For this reason, the municipality has begun planning a program to implement measures to improve the quality of citizens' lives also through the use of a communicative report (Secinaro *et al.*, 2022). The initiative has the primary objective stated by the administration to inform, involve, and mobilise the community, residents, associations, and public and private organisations. Among the international initiatives, signing the Covenant of Mayors of the European Union in support of local efforts emerged strongly (Covenant Of Mayors, 2010). The proposal aims to encourage citizen participation to launch its vision of a creative, dynamic, inclusive, and low-carbon city and achieve ambitious goals such as reducing emissions. The approach presented represents a paradigm shift in the decision-making process, opening the governance actors towards a dialogic and participatory approach.

The authors' analysis considers the level of participation monitored through two moments. The first stage consists of observing the information in 2019 before the announcement of the IPFR – *Bilancio Pop 2020* reporting process. The second aims to monitor citizen engagement stimulated through digital technologies in document preparation. Through the Talkwalker tool, it was possible to observe citizen sentiment and participation (Table 2). Most of the detectable sample comprises men aged between 25 and 34 years.

The feedback from the monitoring process allowed the administration to open the way toward integrating the dialogue within the reporting system. Through several communications with public managers and administrators, it was possible to discern a desire to make reporting dialogic by amplifying the resonance of technological tools. The topic was also observed by public employees who considered that openness to the citizen's needs could open the door to greater communication transparency on the part of the City of Turin. Without discussion channels, the city could not map information needs and stimulate dialogue in the critical period between budget allocation and reporting. On the one hand, the actors' aim in the decision-making process was to establish a progressive dialogue with

Number of users		41.250	
		<i>Gender</i>	
Male	62.1%	Female	37.9%
		<i>Age</i>	
18–24	23.5%	45–54	11.3%
25–34	32.9%	55–64	3.9%
35–44	28.2%	+65	0.2%
		<i>Main interest</i>	
<i>Main job</i>	Managers (22.2%)	Young policy and equal opportunities (31.4%)	
	Authors and writers (15.8%)	Environment (23.1%)	
	Lawyers (11.3%)	Social policy (12.3%)	
	Consultants (11.3%)	Education (6.5%)	
	Logistic (9.1%)	Entertainment and museum (4.7%)	
		<i>Sentiment</i>	
Positive	10.2%	Negative	9.1%

**Table 2.**

The user's map ( $t = 0$ ) **Source(s):** Authors' elaboration based on Talkwalker results

citizens to identify information needs. On the other hand, the resistance of some public managers to communicating the outcomes of administrative activities posed a barrier that could not be overcome. At this stage, the authors noted that the need emerged not to limit itself to legally mandated communication through traditional means but to expand toward dialogue by transforming reporting into a bottom-up moment. A dialogue-oriented public manager stated:

Digital technology was identified as the solution to lead toward greater inclusiveness by different segments of the citizenry. The desired outcome is the information need mapping that we aim to achieve through a dialogue that can satisfy all stakeholders in the process.

The tool initiated a cultural change within the administration where public managers, fearing losing legitimacy and power in making choices, increasing costs and slowing down processes, hindered dialogue (Brescia, 2020).

#### 4.2 Digital technology in dialogical accounting

Digital technology starts to be leveraged in the second phase, beginning with drafting the IPFR – *Bilancio Pop 2020/2021*. They were preparing the report that involved disseminating information to enable public employees to incorporate the needs of citizens. At this stage, civil servants were enthusiastic about being able to dialogue with citizens to stimulate participation and involvement. The process described above transformed the results obtained through digital technologies. The user map in Table 3 shows the main changes from the previous observation phase ( $t = 1$ ). First, the number of users increased significantly, although the age groups most involved have remained the same (from 18 to 44). The citizenry involved in the information process of decision-making was limited to a population of a high social range, such as managers, authors and writers, lawyers, and consultants. The predominant gender was male (62.01%); the most active ages were 24–34 (37.99%), and the principal average was 35–44.

However, the age distribution of users changed, making the predominant cluster comprising citizens between 25 and 34 years old (42.4%). Digital technology can also stimulate higher gender inclusiveness. An increase in female participation (40.4%) within the social network debate is considered. The more significant change appears to be driven by the social inclusion that social media enables. Indeed, the openness to dialogue by the

Number of users		101.373	
<i>Gender</i>			
Male	59.6%	Female	40.4%
<i>Age</i>			
18–24	28.7%	45–54	7.2%
25–34	42.4%	55–64	1.8%
35–44	19.8%	+65	0.1%
<i>Main job</i>		<i>Main interest</i>	
Logistic (18.5%)		Green and environment (29.87%)	
Teacher (14.9%)		Young policy and equal opportunities (28.67%)	
Manager (9.5%)		Sports (6.9%)	
Journalist (8.6%)		Smart policy (6.85%)	
Authors and writers (6.1%)		Waste management and policy (6.44%)	
<i>Sentiment</i>			
Positive	20.9%	Negative	3.72%

Source(s): Authors' elaboration based on Talkwalker

**Table 3.**  
The user's map ( $t = 1$ )

---

administration has made the conversation no longer the preserve of politically interested citizens. It has also extended to people with diverse interests and job positions representing all levels of social stratification. The increased dialogue significantly increased the positive result (20.9%) even though the percentage grew from the previous observation period.

Finally, through the open dialogue channel, the administration could intercept information needs and recognise the sections of most significant interest on which to build reporting, increasing the specificity of the result and of the elements to be represented in order of priority. The Talkwalker analysis tool made it possible to describe the citizen's areas of interest. Specifically, within the online discussion about the city, five areas of interest on which the administration has directed its efforts were identified. The topics are green and environment, young policy and equal opportunities, Sports, Smart policy, and waste management. Almost all topics, except sports, are oriented towards sustainability policies implemented by smart cities that find evidence through analysis and guarantee the correct creation of oriented policies (Brescia, 2020). The themes and attention are focused on the well-being of the population. In particular, the document *Bilancio Pop 2020/2021* offers the opportunity to reclassified and simplified view of budget issues and insights on investment and employment prospects that can allow meeting the needs that have emerged. Digitisation was addressed through insights focused on the smart city of Turin and the digital solutions offered by the municipality to carry out time-consuming paperwork. Regeneration was included in the debate by including the theme within the reporting on activities to improve green spaces (in 2020, the city won the award as the greenest city) and opportunities for revitalisation and cleaning of city areas. Among the projects oriented towards greenery and sustainability, the increase in urban greenery with a progressive increase in planting, but also projects aimed at the redevelopment of neighbourhoods with green walls and roofs, increase in urban gardens, experimentation with aquaponics, indicators for the financial reward of new sustainable works. Equal opportunities have been developed through urban redevelopment projects in some areas, including the area along Dora river and the introduction of technologies helpful in increasing safety and surveillance activities, as well as studying the social fabric with an ethnographic method. Among the crucial projects on equal opportunities are cohousing for the LGBTQ population and projects to promote work among young people with the evolution of a help desk, also telematic, for job orientation and professional training courses. In addition, policies have been developed to promote inclusive language and support HIV/AIDS prevention projects among residents to complement the activities carried out by the health system. Among the projects developed by the Department of Innovation, experiments aimed at reducing the energy consumption of some squares and public areas by 50%, creating an intelligent automatic changeover system from petrol to electric power in the central regions of the city, starting centre research on the possible application of adaptable artificial intelligence to local companies, air transport in the town and experimentation with the adoption of self-driving vehicles. The smart approach to waste disposal management involves increasing separate collection and use for electricity production. Citizens also mapped their sensitivity regarding the collection and use of green energy. Sports, far from the topics generally dealt with by the academic on smart cities, finds approaches oriented toward sustainability in the academic period. During COVID-19, the city developed outdoor courses through directly managed sports facilities to increase well-being while protecting the safety of citizens.

#### *4.3 The effects on the governance process*

The results on governance are found in the change in perspective from those with reluctance toward openness to dialogue. In particular, the interventionist approach showed a decline in reluctance by public managers and servants in favour of enthusiasm for the dialogic

---

approach. When guided by debate, reporting allows for creating an effective bottom-up relationship within the decision-making process. The administration's perception of the issue highlighted how this could lead to the composition of a more efficient information record. Among the main effects on governance resulting from digital technologies, a change in sensitivity relative to issues of concern is prevalent. Previously ( $t = 0$ ), the city had failed to capture citizen sensitivity relative to information needs. Subsequently ( $t = 1$ ), there is a change in approach related to citizen participation that has allowed public managers to overcome resistance to change. Reluctance related to increased workload and administrative activity spread across all sectors appears to have been overcome. The need for political administrators to involve active citizenship arises agile through digital technology capable of streamlining managerial procedures and workload. Among the activities, various projects are oriented to the governance and management of smart cities by introducing different projects and technologies to the system. However, doubts remain about the actual contribution of citizen participation, which risks not being sufficiently qualified to contribute to the reporting process. The age group between 18 and 24 years is the most active on social networks, making up 54.56% of the population in Turin within that age range. The age group between 25 and 34 comprises 45.11% of the resident population, but interactions start decreasing significantly beyond this point. While the age group between 35 and 44 still has a notable presence at 18.4% of potential users, the following age groups show diminishing significance.

In detail, digital technologies were evaluated as suitable to stimulate a reporting process suited to meet the citizenry's demands. The performance of the process was validated through the testimony of managers and servants most involved in the communication process that stimulated discussions on social media. Furthermore, the administration felt facilitated in understanding the required information benchmarks. In particular, the ability to identify themes made the reporting process more dynamic and transparent. However, doubts remain regarding the possibility of engaging certain population segments not included within the social media environment. Due to different communication habits, the shared process did not allow the over-55s to participate. Finally, citizens welcomed the City's commitment to making the process dialogic by promoting the initiative through increased participation.

## 5. Discussion and conclusion

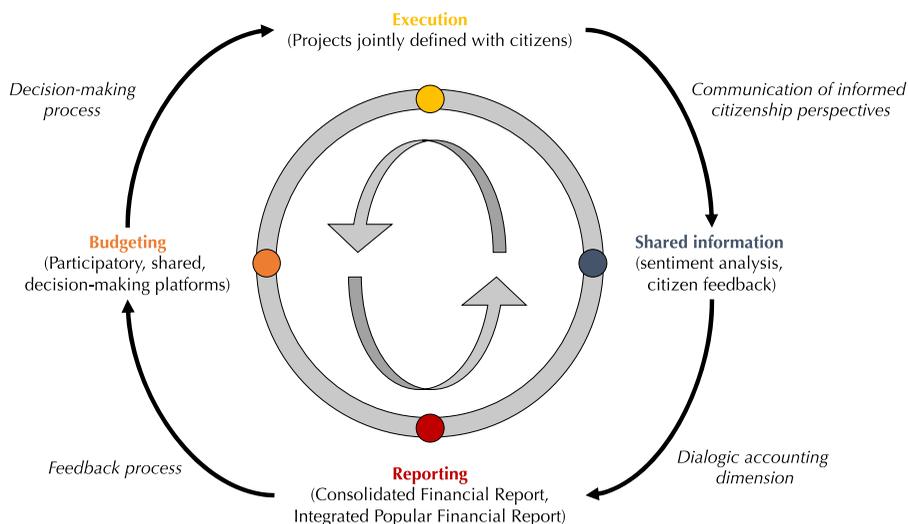
The present research takes advantage of the theoretical lens of collaborative governance to assess the change in decision-making resulting from including digital technologies that stimulate dialogic accounting (Brown, 2009; Emerson *et al.*, 2012; Mora *et al.*, 2019). The topic appears widely debated concerning participatory budgeting (Coleman and Cardoso Sampaio, 2017) but further studies are needed about the reporting to implement transparency, reliability, and accountability (Khanra and Joseph, 2019; Malodia *et al.*, 2021).

The research results show how citizen interactions were instrumental in drafting the IPFR of the Municipality of Turin. Nevertheless, the approach of Galič *et al.* (2017) has not led to a forecasting capacity able to make the information predictive and capitalisable with continuous surveillance and improvement of the decision-making approach with a possible impact on effectiveness and efficiency. The methodology concerning the application of a longitudinal case study (Grossi *et al.*, 2021) highlighted the dialogue stimulated by digital technology in the reporting process, confirming the role of the IPFR as a tool capable of producing dialogic accounting. The technological potentialities have made it possible to perimeter the citizen's information needs and modify the governance approach on the areas to carry out the reporting activity. Specifically, within the citizen online discussion, the administration has been detected in five areas of interest. The topics are green and

environment, young policy and equal opportunities, sports, smart policy, and waste management. The approach is consistent with political administrators' communication needs and citizens' desire to participate in the debate during reporting process. Moreover, digital technology has helped overcome administrators' resistance to change their approach to decision-making (Kozłowski *et al.*, 2018). This section discusses the previous literature to answer the research question.

### 5.1 Theoretical implications

At the theoretical level, the research contributes to the positioning of citizen participation stimulated through technology in the reporting activities of municipalities. Participatory tools have already been integrated within the processes of public administrations under the impetus of political administration to engage in dialogue with the citizenry (Kozłowski *et al.*, 2018; Secinaro *et al.*, 2021a, b). Studies have primarily focused on the budgeting phase through technology-driven participatory allocation (Alfaro *et al.*, 2010; Coleman and Cardoso Sampaio, 2017; Matheus *et al.*, 2010). The present study explores the use of digital technology in the reporting phase and the use of a tool based on big data, network social media and AI (Arnaboldi *et al.*, 2017). The present study confirms that IPFR is a dialogic accounting tool (Grossi *et al.*, 2021) that technology can help to facilitate. The results of the study, in addressing the research question, clearly show that digital technologies enable transparency of government and the public sector. They achieve this by encouraging a dialogue between citizens and institutions and by taking a bottom-up approach. The sentiment analysis of citizens further improves participation by identifying information needs and highlighting key issues. Importantly, this approach doesn't compel social media users to engage in a guided dialogue with the government (Desdemoustier *et al.*, 2019; Nam and Pardo, 2011). In summarising the government process driven by digital technology, Figure 2 highlights the emerging dialogic aspect in the reporting phase. Therefore, IPFR has the potential to trigger a new definition of areas of interest that align with the needs expressed by citizens due to actions undertaken by the government. However, the study reveals a limitation to the



**Figure 2.**  
Government process driven by digital technology with theoretical emphasis on the functions

Source(s): Authors' elaboration

inclusion of all segments of the community. The results highlight the lack of participation among older parts of the population who are less prone to digital technologies. This aligns with the digital divide previously observed concerning social networks, as it necessitates access to devices, the Internet, digital literacy, and sharing personal information (Wahyunengseh *et al.*, 2020). In this vein, the research contributes to determining digital technologies as an enabling tool for transparency in public reporting. However, the distorting aspect arising from the information need driven by some segments of the population, which due to the digital medium tends to exclude others, should be emphasised.

Moreover, the findings are significant within the context of collaborative governance. The literature emphasises the importance of participatory inclusiveness and transparency in institutional design (Ansell and Gash, 2008). In this regard, collaborative governance processes involve administrators, managers, public servants, and citizens as the main actors (Bouckaert and Van de Walle, 2003; Brescia, 2020). The present study illustrates how technology-driven participatory approaches can overcome the reluctance of public managers and employees regarding citizen participation. The research demonstrates that this process does not burden bureaucracy and workload but streamlines the information selection process.

Although the IPFR reporting process has previously been considered a dialogic accounting tool (Grossi *et al.*, 2021), it contributes to fulfilling the need for characterising dialogic accounting through a technological tool capable of addressing the information needs of the citizenry. Therefore, digital technology is a common thread linking collaborative governance and dialogic accounting. Technology has already emerged in the literature as a guiding force in collaborative management (Wijaya *et al.*, 2019). Additionally, dialogic accounting is reinforced by using technology in budget allocation through citizen participation (Coleman and Cardoso Sampaio, 2017). The longitudinal case study presented enables us to consider the importance of digital technology in integrating dialogic accounting into reporting practices by transforming the relationships among actors in collaborative governance.

### 5.2 Practical implications

The evidence provided appears generalisable across countries in the same group. The longitudinal case study emphasised the moment of document writing through a bottom-up approach through simulation of citizen participation by sharing accounting and non-financial information (Macintosh, 2004). Practical implications emerge through the representation of change in actual degrees of stakeholder engagement at the time prior reporting. The contribution of the study is to offer actors involved in the decision-making process a valuable case study for moving beyond reluctance and reducing the bureaucracy dictated by the participatory process (Yang and Callahan, 2007). Indeed, this approach based on collaborative governance and dialogic accounting highlights the issues requested to respond to information needs through an approach based on technology.

Furthermore, technologies appeared to be valuable tools in the budgeting phase (Ansell and Gash, 2008) and the reporting phase. The research highlighted the incidence of technology leading to increased participation and better reception of information by administrations and public managers. It is impossible to hypothesise a rigid scheme for information needs as they can change yearly, and pursuing satisfaction objectives seems necessary. Applying digital technologies within the process increases dialogue compared to traditional tools. The analysis was carried out during the pandemic period and shows the possibilities and propensities provided by technologies during this period. Although participatory tables and consultations allow going beyond the digital divide, social media allows overcoming the bias dictated by the need to be part of active citizenship and interested

---

in political activity directly. Active citizenship pursues public value democratically and collaboratively (Bryson *et al.*, 2014). However, it does not represent the entire city's needs fully.

On these assumptions, engagement is fed as citizens are aware of their role. In collaborative governance, the role of actors leads to participatory inclusiveness and transparency. If technology facilitates all actors in the process, momentum will be dictated by all sides, political, managerial and by citizens. There remains the need to provide citizens with information capable of overcoming deficiencies in skills and knowledge to make a real contribution to the reporting process.

### *5.3 Policymakers implications*

This study underscores the digital divide as a significant barrier to implementing an IPFR that relies on digital tools. According to Desdemoustier *et al.* (2019), the role of various non-digital tools in fostering citizen interaction during budgeting processes. Specifically, effective citizen empowerment at the decision-making stage is crucial, as highlighted by Cabannes (2004). Traditional collaborative governance methods, such as participatory discussion forums and representative engagements (Bryson *et al.*, 2014), remain valuable. However, the study suggests a hybrid model that link traditional methods with digital tools to fully engage citizens.

While supranational entities like the European Commission (2020) and the United Nations (2015) advocate for digitalisation, this research identifies a significant age-related digital divide among citizens. Policy makers are encouraged to bridge this gap by providing training and promoting digital literacy, especially among older and non-digital native populations. The goal is to enhance understanding and effective use of new media for communication and information sharing. By increasing citizen awareness and participation through these means, policy administrations can ensure a more robust and continuous dialogue concerning their actions and decisions.

### *5.4 Limitations and future research*

Like any research, there are several limitations to this study. The first limitation is related to the context of the City of Turin. However, the study can be generalised because based on smart administration in terms of governance and experimentation changing technological, organisational and governance aspects (Secinaro *et al.*, 2021a, b). Each city has different business models and industry regulations (Biancone *et al.*, 2022). Therefore, the results should be generalised considering the historical period and the geographical context underlying the case study. Future analyses may confirm the results as generalisable to additional contexts that propose participatory reporting (Secinaro *et al.*, 2019). Additionally, social media represents a risky technological iteration that could reinforce power differentials and reduce the quality of communication between the government and the citizenry (Piccorelli and Stivers, 2019). In particular, the Talkwalker software used to identify information needs is characterised by its inability to map private social profiles or those on unconventional platforms. The acceleration toward digital technology in the reporting process seems evident as the limitations of the current mapping state.

As a result, flourishing research fields are related to identifying new software or technologies capable of channelling citizen needs through the web. The findings highlight a tangible digital divide within the population analysed (Van Dijk, 2017). Therefore, other researchers could identify information-gathering mechanisms capable of fuelling the dialogic process in reporting closer to the segments of the population most affected by the digital divide. Finally, reporting activities take advantage of IPFRs' communication with the citizenry through a dialogue intended for non-experts. Extending the dialogue to every

segment of the citizenry may increase skills and abilities over time. As discerned by the present study, the active citizenry means a sample of dialogue participants who are better educated, more affluent, technologically savvy, and more knowledgeable about urban policy issues (Karlsson, 2012; Neirotti *et al.*, 2014; Stratigea *et al.*, 2015). Therefore, the future may consider the current situation to look for a solution that can amplify the communication scope and channel the needs of the citizenry less attentive to active participation.

The paper generalises the function of collaborative governance across all actors. Further research can investigate the role of each group that contribute to the collaborative governance process (Aleksandrov *et al.*, 2020). While representing an opportunity for theoretical construction, the paper encourages IPFR scholars to offer more depth related to the function of political administrators, public managers, and citizens. Furthermore, future studies could benefit from employing other theoretical lenses, such as institutional theory (Modell *et al.*, 2017) and a morphogenetic approach (Ahmed and Uddin, 2018), potentially bringing interesting insights into the reactions of public managers over time.

## References

- Agostino, D., Arnaboldi, M. and Lema, M.D. (2021), "New development: COVID-19 as an accelerator of digital transformation in public service delivery", *Public Money and Management*, Vol. 41 No. 1, pp. 69-72, doi: [10.1080/09540962.2020.1764206](https://doi.org/10.1080/09540962.2020.1764206).
- Agranoff, R. and McGuire, M. (2003), *Collaborative Public Management: New Strategies for Local Governments*, Georgetown University Press, Washington, DC.
- Ahmed, S. and Uddin, S. (2018), "Toward a political economy of corporate governance change and stability in family business groups: a morphogenetic approach", *Accounting, Auditing and Accountability Journal*, Vol. 31 No. 8, pp. 2192-2217, doi: [10.1108/aaaj-01-2017-2833](https://doi.org/10.1108/aaaj-01-2017-2833).
- Aleksandrov, E., Bourmistrov, A. and Grossi, G. (2018), "Participatory budgeting as a form of dialogic accounting in Russia: actors' institutional work and reflexivity trap", *Accounting, Auditing and Accountability Journal*, Vol. 31 No. 4, pp. 1098-1123, doi: [10.1108/aaaj-02-2016-2435](https://doi.org/10.1108/aaaj-02-2016-2435).
- Aleksandrov, E., Bourmistrov, A. and Grossi, G. (2020), "Performance budgeting as a 'creative distraction' of accountability relations in one Russian municipality", *Journal of Accounting in Emerging Economies*, Vol. 10 No. 3, pp. 399-424, doi: [10.1108/JAEE-08-2019-0164](https://doi.org/10.1108/JAEE-08-2019-0164).
- Alfaro, C., Gómez, J. and Ríos, J. (2010), "From participatory to e-participatory budgets", *E-democracy*, Vol. 1 No. 1, pp. 283-299, doi: [10.1007/978-90-481-9045-4\\_16](https://doi.org/10.1007/978-90-481-9045-4_16).
- Allen, B.A., Juillet, L., Paquet, G. and Roy, J. (2005), "E-government as collaborative governance: structural, accountability and cultural reform", *Practicing E-Government: A Global Perspective*, Vol. 1 No. 1, pp. 1-15.
- Ansell, C. and Gash, A. (2008), "Collaborative governance in theory and practice", *Journal of Public Administration Research and Theory*, Vol. 18 No. 4, pp. 543-571, doi: [10.1093/jopart/mum032](https://doi.org/10.1093/jopart/mum032).
- Arnaboldi, M., Busco, C. and Cuganesan, S. (2017), "Accounting, accountability, social media and big data: revolution or hype?", *Accounting, Auditing and Accountability Journal*, Vol. 30 No. 4, pp. 762-776, doi: [10.1108/aaaj-03-2017-2880](https://doi.org/10.1108/aaaj-03-2017-2880).
- Arnstein, S.R. (1969), "A ladder of citizen participation", *Journal of the American Institute of Planners*, Vol. 35 No. 4, pp. 216-224, doi: [10.1080/01944366908977225](https://doi.org/10.1080/01944366908977225).
- Baard, V.C. and Dumay, J. (2020), "Interventionist research in accounting: reflections on the good, the bad and the ugly", *Accounting and Finance*, Vol. 60 No. 3, pp. 1979-2006, doi: [10.1111/acfi.12409](https://doi.org/10.1111/acfi.12409).
- Babaeinesami, A. (2019), "The investigation of effective factors on employee motivation: a case study", *EuroMed Journal of Management*, Vol. 3 No. 2, p. 155, doi: [10.1504/EMJM.2019.104329](https://doi.org/10.1504/EMJM.2019.104329).
- Biancone, P.P., Brescia, V., Lanzalonga, F. and Alam, G.M. (2022), "Using bibliometric analysis to map innovative business models for vertical farm entrepreneurs", *British Food Journal*, Vol. 124 No. 7, pp. 2239-2261, doi: [10.1108/BFJ-08-2021-0904](https://doi.org/10.1108/BFJ-08-2021-0904).

- 
- Bifulco, F., Tregua, M., Amitrano, C.C. and D'Auria, A. (2016), "ICT and sustainability in smart cities management", *International Journal of Public Sector Management*, Vol. 29 No. 2, pp. 132-147, doi: [10.1108/ijpsm-07-2015-0132](https://doi.org/10.1108/ijpsm-07-2015-0132).
- Biondi, L. and Bracci, E. (2018), "Sustainability, popular and integrated reporting in the public sector: a fad and fashion perspective", *Sustainability*, Vol. 10 No. 9, p. 3112, doi: [10.3390/su10093112](https://doi.org/10.3390/su10093112).
- Bouckaert, G. and Van de Walle, S. (2003), "Comparing measures of citizen trust and user satisfaction as indicators of 'good governance': difficulties in linking trust and satisfaction indicators", *International Review of Administrative Sciences*, Vol. 69 No. 3, pp. 329-343, doi: [10.1177/00208523030693003](https://doi.org/10.1177/00208523030693003).
- Bracci, E., Deidda Gagliardo, E. and Bigoni, M. (2014), "Performance management systems and public value strategy: a case study", *Public Value Management, Measurement and Reporting*, Vol. 3, pp. 129-157, doi: [10.1108/s2051-663020140000003006](https://doi.org/10.1108/s2051-663020140000003006).
- Bracci, E., Humphrey, C., Moll, J. and Steccolini, I. (2015), "Public sector accounting, accountability and austerity: more than balancing the books?", *Accounting, Auditing and Accountability Journal*, Vol. 28 No. 6, pp. 878-908, doi: [10.1108/aaaj-06-2015-2090](https://doi.org/10.1108/aaaj-06-2015-2090).
- Brescia, V. (2020), *Smart City E Citizen Participation. Strumenti, Governance e Performance*, G. Giappichelli Editore, Torino, Vol. 10.
- Brown, J. (2009), "Democracy, sustainability and dialogic accounting technologies: taking pluralism seriously", *Critical Perspectives on Accounting*, Vol. 20 No. 3, pp. 313-342, doi: [10.1016/j.cpa.2008.08.002](https://doi.org/10.1016/j.cpa.2008.08.002).
- Brown, J. and Dillard, J. (2015), "Dialogic accountings for stakeholders: on opening up and closing down participatory governance", *Journal of Management Studies*, Vol. 52 No. 7, pp. 961-985, doi: [10.1111/joms.12153](https://doi.org/10.1111/joms.12153).
- Bryson, J.M., Crosby, B.C. and Bloomberg, L. (2014), "Public value governance: moving beyond traditional public administration and the new public management", *Public Administration Review*, Vol. 74 No. 4, pp. 445-456, doi: [10.1111/puar.12238](https://doi.org/10.1111/puar.12238).
- Cabannes, Y. (2004), "Participatory budgeting: a significant contribution to participatory democracy", *Environment and Urbanization*, Vol. 16 No. 1, pp. 27-46, doi: [10.1177/095624780401600104](https://doi.org/10.1177/095624780401600104).
- Camilleri, M.A. (2020), "Quality education, social cohesion and active labour market policies. A case study from a Southern European island state", *EuroMed Journal of Management*, Vol. 3 Nos 3/4, p. 182, doi: [10.1504/EMJM.2020.113080](https://doi.org/10.1504/EMJM.2020.113080).
- Cammaerts, B. (2008), "Critiques on the participatory potentials of Web 2.0", *Communication, Culture and Critique*, Vol. 1 No. 4, pp. 358-377, doi: [10.1111/j.1753-9137.2008.00028.x](https://doi.org/10.1111/j.1753-9137.2008.00028.x).
- Caratù, M., Brescia, V., Pigliatile, I. and Biancone, P. (2023), "Assessing energy communities' awareness on social media with a content and sentiment analysis", *Sustainability*, Vol. 15 No. 8, p. 6976, doi: [10.3390/su15086976](https://doi.org/10.3390/su15086976).
- Chen, Y.-C. and Chang, T.-W. (2020), "Explaining government's online transparency on collaborative policy platforms: risk management and configurational conditions", *Public Performance and Management Review*, Vol. 43 No. 3, pp. 560-586, doi: [10.1080/15309576.2019.1574591](https://doi.org/10.1080/15309576.2019.1574591).
- Chouaibi, J., Belhouchet, S., Almallah, R. and Chouaibi, Y. (2022), "Do board directors and good corporate governance improve integrated reporting quality? The moderating effect of CSR: an empirical analysis", *EuroMed Journal of Business*, Vol. 17 No. 4, pp. 593-618, doi: [10.1108/emjb-04-2021-0066](https://doi.org/10.1108/emjb-04-2021-0066).
- Coleman, S. and Cardoso Sampaio, R. (2017), "Sustaining a democratic innovation: a study of three e-participatory budgets in Belo Horizonte", *Information, Communication and Society*, Vol. 20 No. 5, pp. 754-769, doi: [10.1080/1369118x.2016.1203971](https://doi.org/10.1080/1369118x.2016.1203971).
- Cortés-Cediel, M.E., Cantador, I. and Bolívar, M.P.R. (2021), "Analyzing citizen participation and engagement in european smart cities", *Social Science Computer Review*, Vol. 39 No. 4, pp. 592-626, doi: [10.1177/0894439319877478](https://doi.org/10.1177/0894439319877478).

- Covenant of Mayors (2010), "Four peer-learning programmes tailored to your needs: twinning, expert mission, peer review, and technical assistance", *European Commission*, available at: <https://eu-mayors.ec.europa.eu/en/about>
- Crous, C., Battisti, E. and Leonidou, E. (2022), "Non-financial reporting and company financial performance: a systematic literature review and integrated framework", *EuroMed Journal of Business*, Vol. 17 No. 4, pp. 652-676, doi: [10.1108/emjb-12-2020-0134](https://doi.org/10.1108/emjb-12-2020-0134).
- Dadzie, J., Runeson, G., Ding, G. and Bondinuba, F.K. (2018), "Barriers to adoption of sustainable technologies for energy-efficient building upgrade—semi-Structured interviews", *Buildings, Multidisciplinary Digital Publishing Institute*, Vol. 8 No. 4, p. 57, doi: [10.3390/buildings8040057](https://doi.org/10.3390/buildings8040057).
- de Bem Machado, A., Secinaro, S., Calandra, D. and Lanzalonga, F. (2021), "Knowledge management and digital transformation for Industry 4.0: a structured literature review", *Knowledge Management Research and Practice*, Vol. 20 No. 2, pp. 1-19, doi: [10.1080/14778238.2021.2015261](https://doi.org/10.1080/14778238.2021.2015261).
- Denhardt, J.V. and Denhardt, R.B. (2015), *The New Public Service: Serving, Not Steering*, Routledge, New York.
- Desdemoustier, J., Crutzen, N. and Giffinger, R. (2019), "Municipalities' understanding of the Smart City concept: an exploratory analysis in Belgium", *Technological Forecasting and Social Change*, Vol. 142, pp. 129-141, doi: [10.1016/j.techfore.2018.10.029](https://doi.org/10.1016/j.techfore.2018.10.029).
- DiMaggio, P., Hargittai, E., Celeste, C. and Shafer, S. (2004), "Digital inequality: from unequal access to differentiated use", *Social Inequality*, Vol. 1, pp. 355-400.
- Eisenhardt, K.M. (1989), "Building theories from case study research", *Academy of Management Review*, Vol. 14 No. 4, pp. 532-550, doi: [10.5465/amr.1989.4308385](https://doi.org/10.5465/amr.1989.4308385).
- Elazar, D.J. (1962), *The American Partnership: Intergovernmental Co-operation in the Nineteenth-Century United States*, University of Chicago Press, Chicago, IL.
- Emerson, K., Nabatchi, T. and Balogh, S. (2012), "An integrative framework for collaborative governance", *Journal of Public Administration Research and Theory*, Vol. 22 No. 1, pp. 1-29, doi: [10.1093/jopart/mur011](https://doi.org/10.1093/jopart/mur011).
- European Commission (2020), "Recovery plan for europe", Text, available at: [https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response\\_en](https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response_en) (accessed 13 September 2021).
- Feeney, M.K. and Porumbescu, G. (2021), "The limits of social media for public administration research and practice", *Public Administration Review*, Vol. 81 No. 4, pp. 787-792, doi: [10.1111/puar.13276](https://doi.org/10.1111/puar.13276).
- Ferraris, A., Santoro, G. and Pellicelli, A.C. (2020), "'Openness' of public governments in smart cities: removing the barriers for innovation and entrepreneurship", *International Entrepreneurship and Management Journal*, Vol. 16 No. 4, pp. 1259-1280, doi: [10.1007/s11365-020-00651-4](https://doi.org/10.1007/s11365-020-00651-4).
- Flick, U. (2004), "Triangulation in qualitative research", *A Companion to Qualitative Research*, Vol. 3, pp. 178-183.
- Fliervoet, J.M., Geerling, G.W., Mostert, E. and Smits, A.J.M. (2016), "Analyzing collaborative governance through social network analysis: a case study of river management along the waal river in The Netherlands", *Environmental Management*, Vol. 57 No. 2, pp. 355-367, doi: [10.1007/s00267-015-0606-x](https://doi.org/10.1007/s00267-015-0606-x).
- Galič, M., Timan, T. and Koops, B.-J. (2017), "Bentham, Deleuze and beyond: an overview of surveillance theories from the panopticon to participation", *Philosophy and Technology*, Vol. 30 No. 1, pp. 9-37, doi: [10.1007/s13347-016-0219-1](https://doi.org/10.1007/s13347-016-0219-1).
- Gil-Garcia, J.R. (2012), *Enacting Electronic Government Success: an Integrative Study of Government-wide Websites, Organizational Capabilities, and Institutions*, Springer, London, Vol. 31.
- Gilman, H.R. (2017), "Civic tech for urban collaborative governance", *PS: Political Science and Politics*, Vol. 50 No. 3, pp. 744-750, doi: [10.1017/s1049096517000531](https://doi.org/10.1017/s1049096517000531).
- Grossi, G., Biancone, P.P., Secinaro, S. and Brescia, V. (2021), "Dialogic accounting through popular reporting and digital platforms", *Meditari Accountancy Research*, Vol. 29 No. 7, pp. 75-93, doi: [10.1108/medar-01-2021-1163](https://doi.org/10.1108/medar-01-2021-1163).

- 
- Gummesson, E. (2006), "Qualitative research in management: addressing complexity, context and persona", *Management Decision*, Vol. 44 No. 2, pp. 167-179, doi: [10.1108/00251740610650175](https://doi.org/10.1108/00251740610650175).
- Hannabuss, S. (1996), "Research interviews", *New Library World*, Vol. 97 No. 5, pp. 22-30, doi: [10.1108/03074809610122881](https://doi.org/10.1108/03074809610122881).
- Haustein, E. and Lorson, P.C. (2021), "Co-creation and co-production in municipal risk governance—A case study of citizen participation in a German city", *Public Management Review*, Vol. 25 No. 2, pp. 1-28, doi: [10.1080/14719037.2021.1972704](https://doi.org/10.1080/14719037.2021.1972704).
- Hinings, B., Gegenhuber, T. and Greenwood, R. (2018), "Digital innovation and transformation: an institutional perspective", *Information and Organization*, Vol. 28 No. 1, pp. 52-61, doi: [10.1016/j.infoandorg.2018.02.004](https://doi.org/10.1016/j.infoandorg.2018.02.004).
- Ho, A.T.-K. (2002), "Reinventing local governments and the e-government initiative", *Public Administration Review*, Vol. 62 No. 4, pp. 434-444, doi: [10.1111/0033-3352.00197](https://doi.org/10.1111/0033-3352.00197).
- Houcine, A., Zitouni, M. and Srairi, S. (2022), "The impact of corporate governance and IFRS on the relationship between financial reporting quality and investment efficiency in a continental accounting system", *EuroMed Journal of Business*, Vol. 17 No. 2, pp. 246-269, doi: [10.1108/emjb-06-2020-0063](https://doi.org/10.1108/emjb-06-2020-0063).
- Imen, F. and Anis, J. (2021), "The moderating role of audit quality on the relationship between auditor reporting and earnings management: empirical evidence from Tunisia", *EuroMed Journal of Business*, Vol. 16 No. 4, pp. 416-430, doi: [10.1108/emjb-03-2020-0024](https://doi.org/10.1108/emjb-03-2020-0024).
- Karlsson, M. (2012), "Democratic legitimacy and recruitment strategies in eParticipation projects", *Empowering Open and Collaborative Governance*, Vol. 1, pp. 3-20, doi: [10.1007/978-3-642-27219-6\\_1](https://doi.org/10.1007/978-3-642-27219-6_1).
- Kent, M.L. and Taylor, M. (1998), "Building dialogic relationships through the world wide Web", *Public Relations Review*, Vol. 24 No. 3, pp. 321-334, doi: [10.1016/s0363-8111\(99\)80143-x](https://doi.org/10.1016/s0363-8111(99)80143-x).
- Khanra, S. and Joseph, R.P. (2019), "Adoption of e-Governance: the mediating role of language proficiency and digital divide in an emerging market context", *Transforming Government: People, Process and Policy*, Vol. 13 No. 2, pp. 122-142, doi: [10.1108/tg-12-2018-0076](https://doi.org/10.1108/tg-12-2018-0076).
- Korhonen, T., Selos, E., Laine, T. and Suomala, P. (2020), "Exploring the programmability of management accounting work for increasing automation: an interventionist case study", *Accounting, Auditing and Accountability Journal*, Vol. 34 No. 2, pp. 253-280, doi: [10.1108/aaaj-12-2016-2809](https://doi.org/10.1108/aaaj-12-2016-2809).
- Kozlowski, S., Issa, H. and Appelbaum, D. (2018), "Making government data valuable for constituents: the case for the advanced data analytics capabilities of the ENHANCE framework", *Journal of Emerging Technologies in Accounting*, Vol. 15 No. 1, pp. 155-167, doi: [10.2308/jeta-52096](https://doi.org/10.2308/jeta-52096).
- Lanzalonga, F., Oppioli, M., Dal Mas, F. and Secinaro, S. (2023), "Drones in Venice: exploring business model applications for disruptive mobility and stakeholders' value proposition", *Journal of Cleaner Production*, Vol. 423, 138764, doi: [10.1016/j.jclepro.2023.138764](https://doi.org/10.1016/j.jclepro.2023.138764).
- Longhurst, R. (2003), "Semi-structured interviews and focus groups", *Key Methods in Geography*, Vol. 3 No. 2, pp. 143-156.
- Lytras, M.D., Raghavan, V. and Damiani, E. (2017), "Big data and data analytics research: from metaphors to value space for collective wisdom in human decision making and smart machines", *International Journal on Semantic Web and Information Systems (IJSWIS)*, Vol. 13 No. 1, pp. 1-10, doi: [10.4018/ijswis.2017010101](https://doi.org/10.4018/ijswis.2017010101).
- Macintosh, A. (2004), "Characterizing e-participation in policy-making", *37th Annual Hawaii International Conference on System Sciences*, 2004, Proceedings of The, IEEE, pp. 10-pp, doi: [10.1109/HICSS.2004.1265300](https://doi.org/10.1109/HICSS.2004.1265300).
- Malodia, S., Dhir, A., Mishra, M. and Bhatti, Z.A. (2021), "Future of e-Government: an integrated conceptual framework", *Technological Forecasting and Social Change*, Vol. 173, 121102, doi: [10.1016/j.techfore.2021.121102](https://doi.org/10.1016/j.techfore.2021.121102).

- Matheus, R., Ribeiro, M.M., Vaz, J.C. and de Souza, C.A. (2010), "Case studies of digital participatory budgeting in Latin America: models for citizen engagement", *Proceedings of the 4th International Conference on Theory and Practice of Electronic Governance*, pp. 31-36.
- Merli, M.Z. and Bonollo, E. (2014), *Performance Measurement in the Smart Cities*, Springer, Smart City, pp. 139-155.
- Migchelbrink, K. and Van de Walle, S. (2021), "A systematic review of the literature on determinants of public managers' attitudes toward public participation", *Local Government Studies*, Vol. 48, pp. 1-22, doi: [10.1080/03003930.2021.1885379](https://doi.org/10.1080/03003930.2021.1885379).
- Mihelj, S., Leguina, A. and Downey, J. (2019), "Culture is digital: cultural participation, diversity and the digital divide", *New Media and Society*, Vol. 21 No. 7, pp. 1465-1485, doi: [10.1177/1461444818822816](https://doi.org/10.1177/1461444818822816).
- Miller, W.L. and Crabtree, B.F. (1994), "Qualitative analysis: how to begin making sense", *Family Practice Research Journal*, Vol. 14 No. 3, pp. 289-297.
- Modell, S., Vinnari, E. and Lukka, K. (2017), "On the virtues and vices of combining theories: the case of institutional and actor-network theories in accounting research", *Accounting, Organizations and Society*, Vol. 60, pp. 62-78, doi: [10.1016/j.aos.2017.06.005](https://doi.org/10.1016/j.aos.2017.06.005).
- Mora, L. and Deakin, M. (2019), *Untangling Smart Cities: from Utopian Dreams to Innovation Systems for a Technology-Enabled Urban Sustainability*, Elsevier, Amsterdam.
- Mora, L., Deakin, M. and Reid, A. (2019), "Strategic principles for smart city development: a multiple case study analysis of European best practices", *Technological Forecasting and Social Change*, Vol. 142, pp. 70-97, doi: [10.1016/j.techfore.2018.07.035](https://doi.org/10.1016/j.techfore.2018.07.035).
- Morse, R.S. (2011), "The practice of collaborative governance", *Public Administration Review*, Vol. 71 No. 1, pp. 953-956.
- Nam, T. and Pardo, T.A. (2011), "Conceptualizing smart city with dimensions of technology, people, and institutions", *Proceedings of the 12th Annual International Digital Government Research Conference: Digital Government Innovation in Challenging Times*, pp. 282-291.
- Ndou, V. (2004), "E-Government for developing countries: opportunities and challenges", *The Electronic Journal of Information Systems in Developing Countries*, Vol. 18 No. 1, pp. 1-24, doi: [10.1002/j.1681-4835.2004.tb00117.x](https://doi.org/10.1002/j.1681-4835.2004.tb00117.x).
- Neirotti, P., De Marco, A., Cagliano, A.C., Mangano, G. and Scorrano, F. (2014), "Current trends in Smart City initiatives: some stylised facts", *Cities*, Vol. 38, pp. 25-36, doi: [10.1016/j.cities.2013.12.010](https://doi.org/10.1016/j.cities.2013.12.010).
- Newman, J., Barnes, M., Sullivan, H. and Knops, A. (2004), "Public participation and collaborative governance", *Journal of Social Policy*, Vol. 33 No. 2, pp. 203-223, doi: [10.1017/s0047279403007499](https://doi.org/10.1017/s0047279403007499).
- Olson, M. (2012), "The logic of collective action [1965]", *Contemporary Sociological Theory*, Vol. 124.
- Ostrom, E. (1990), *Governing the Commons: the Evolution of Institutions for Collective Action*, Cambridge University press, Cambridge.
- Parida, V., Sjödin, D. and Reim, W. (2019), *Reviewing Literature on Digitalization, Business Model Innovation, and Sustainable Industry: Past Achievements and Future Promises*, Multidisciplinary Digital Publishing Institute, Basel.
- Persily, N. (2017), "The 2016 US Election: can democracy survive the internet?", *Journal of Democracy*, Vol. 28 No. 2, pp. 63-76, doi: [10.1353/jod.2017.0025](https://doi.org/10.1353/jod.2017.0025).
- Piccorelli, J.T. and Stivers, C. (2019), "Exiled to Main Street: how government's use of social media diminishes public space", *Journal of Public Affairs*, Vol. 19 No. 4, p. e1955, doi: [10.1002/pa.1955](https://doi.org/10.1002/pa.1955).
- Piotrowski, S., Grimmelikhuijsen, S. and Deat, F. (2019), "Numbers over narratives? How government message strategies affect citizens' attitudes", *Public Performance and Management Review*, Vol. 42 No. 5, pp. 1005-1028, doi: [10.1080/15309576.2017.1400992](https://doi.org/10.1080/15309576.2017.1400992).
- Purdy, J.M. (2012), "A framework for assessing power in collaborative governance processes", *Public Administration Review*, Vol. 72 No. 3, pp. 409-417, doi: [10.1111/j.1540-6210.2011.02525.x](https://doi.org/10.1111/j.1540-6210.2011.02525.x).

- 
- Scott, C. (2011), "A case study in collaborative governance: health care law reform in Georgia", *Conflict Resolution Quarterly*, Vol. 28 No. 4, pp. 441-463, doi: [10.1002/crq.20029](https://doi.org/10.1002/crq.20029).
- Secinaro, S., Brescia, V., Calandra, D. and Chmet, F. (2019), "The popular financial reporting for hybrid organization: a solution to A tricky accounting problem", *Journal of Accounting and Finance*, Vol. 19 No. 8, pp. 2158-3625.
- Secinaro, S., Brescia, V., Calandra, D. and Biancone, P. (2021a), "Towards a hybrid model for the management of smart city initiatives", *Cities*, Vol. 116, 103278, doi: [10.1016/j.cities.2021.103278](https://doi.org/10.1016/j.cities.2021.103278).
- Secinaro, S., Brescia, V., Iannaci, D. and Jonathan, G.M. (2021b), "Does citizen involvement feed on digital platforms?", *International Journal of Public Administration*, Vol. 45 No. 9, pp. 1-18, doi: [10.1080/01900692.2021.1887216](https://doi.org/10.1080/01900692.2021.1887216).
- Secinaro, S., Brescia, V., Lanzalonga, F. and Santoro, G. (2022), "Smart city reporting: a bibliometric and structured literature review analysis to identify technological opportunities and challenges for sustainable development", *Journal of Business Research*, Vol. 149, pp. 296-313, doi: [10.1016/j.jbusres.2022.05.032](https://doi.org/10.1016/j.jbusres.2022.05.032).
- Secinaro, S.F., Calandra, D., Roberto, M. and Lanzalonga, F. (2023), "Artificial intelligence and healthcare connection: a state-of-the-art discussion among academics and practitioners", *Incorporating AI Technology in the Service Sector-Innovations in Creating Knowledge, Improving Efficiency, and Elevating Quality of Life*, Vol. 1, pp. 1-24.
- Siggelkow, N. (2002), "Evolution toward fit", *Administrative Science Quarterly*, Vol. 47 No. 1, pp. 125-159, doi: [10.2307/3094893](https://doi.org/10.2307/3094893).
- Siggelkow, N. (2007), "Persuasion with case studies", *Academy of Management Journal*, Vol. 50 No. 1, pp. 20-24, doi: [10.5465/amj.2007.24160882](https://doi.org/10.5465/amj.2007.24160882).
- Smith, J.M. (1984), "Game theory and the evolution of behaviour", *Behavioral and Brain Sciences*, Vol. 7 No. 1, pp. 95-101, doi: [10.1017/s0140525x00026327](https://doi.org/10.1017/s0140525x00026327).
- Stoker, G. (2004), "Designing institutions for governance in complex environments: normative rational choice and cultural institutional theories explored and contrasted", *Economic and Social Research Council Fellowship Paper*, Vol. 1 No. 4, pp. 176-191.
- Stratigea, A., Papadopoulou, C.-A. and Panagiotopoulou, M. (2015), "Tools and technologies for planning the development of smart cities", *Journal of Urban Technology*, Vol. 22 No. 2, pp. 43-62, doi: [10.1080/10630732.2015.1018725](https://doi.org/10.1080/10630732.2015.1018725).
- Sutton, S.G., Holt, M. and Arnold, V. (2016), "'The reports of my death are greatly exaggerated'—artificial intelligence research in accounting", *International Journal of Accounting Information Systems*, Vol. 22, pp. 60-73, doi: [10.1016/j.accinf.2016.07.005](https://doi.org/10.1016/j.accinf.2016.07.005).
- Tanda, A., De Marco, A. and Rosso, M. (2017), "Evaluating the impact of smart city initiatives—the Torino living lab experience", *International Conference on Smart Cities and Green ICT Systems*, Vol. 2, Scitepress, pp. 281-286.
- Thomson, I. and Bebbington, J. (2004), "It doesn't matter what you teach?", *Critical Perspectives on Accounting*, Vol. 15 Nos 4-5, pp. 609-628, doi: [10.1016/s1045-2354\(03\)00049-2](https://doi.org/10.1016/s1045-2354(03)00049-2).
- Todoruț, A.V. and Tselentis, V. (2018), *Digital Technologies and the Modernization of Public Administration*, Calitatea-Acces La Succes, Ankara.
- Tomor, Z. (2019), "The Citipreneur: how a local entrepreneur creates public value through smart technologies and strategies", *International Journal of Public Sector Management*, Vol. 32 No. 5, pp. 508-529, doi: [10.1108/ijpsm-02-2018-0060](https://doi.org/10.1108/ijpsm-02-2018-0060).
- Troisi, O., Grimaldi, M., Loia, F. and Maione, G. (2018), "Big data and sentiment analysis to highlight decision behaviours: a case study for student population", *Behaviour and Information Technology*, Vol. 37 Nos 10-11, pp. 1111-1128, doi: [10.1080/0144929x.2018.1502355](https://doi.org/10.1080/0144929x.2018.1502355).
- Ulibarri, N. (2015), "Tracing process to performance of collaborative governance: a comparative case study of federal hydropower licensing", *Policy Studies Journal*, Vol. 43 No. 2, pp. 283-308, doi: [10.1111/psj.12096](https://doi.org/10.1111/psj.12096).
- United Nations (2015), "SDGs - sustainable development goals".

- 
- Van Dijk, J.A. (2017), "Digital divide: impact of access", *The International Encyclopedia of Media Effects*, Vol. 1, pp. 1-11, doi: [10.1002/9781118783764.wbieme0043](https://doi.org/10.1002/9781118783764.wbieme0043).
- Vigoda-Gadot, E. and Meisler, G. (2010), "Emotions in management and the management of emotions: the impact of emotional intelligence and organizational politics on public sector employees", *Public Administration Review*, Vol. 70 No. 1, pp. 72-86, doi: [10.1111/j.1540-6210.2009.02112.x](https://doi.org/10.1111/j.1540-6210.2009.02112.x).
- Wachhaus, A. (2017), "Platform governance: developing collaborative democracy", *Administrative Theory and Praxis*, Vol. 39 No. 3, pp. 206-221, doi: [10.1080/10841806.2017.1345509](https://doi.org/10.1080/10841806.2017.1345509).
- Wahyunengseh, R.D., Hastjarjo, S., Mulyaningsih, T. and Suharto, D.G. (2020), "Digital governance and digital divide: a matrix of the poor's vulnerabilities", *Policy and Governance Review*, Vol. 4 No. 2, pp. 152-166, doi: [10.30589/pgr.v4i2.296](https://doi.org/10.30589/pgr.v4i2.296).
- Wang, D., Zhou, T. and Wang, M. (2021), "Information and communication technology (ICT), digital divide and urbanization: evidence from Chinese cities", *Technology in Society*, Vol. 64, 101516, doi: [10.1016/j.techsoc.2020.101516](https://doi.org/10.1016/j.techsoc.2020.101516).
- West, D.M. (2004), *Global E-Government*, Center for Public Policy, Brown University Providence, RI.
- Wijaya, A.A.M., Sa'ban, L.A. and Mayunita, S. (2019), "Collaborative governance to evolve smart city in local governments", *Prosiding ICOGISS*, Vol. 2019, pp. 275-286.
- Yang, K. and Callahan, K. (2007), "Citizen involvement efforts and bureaucratic responsiveness: participatory values, stakeholder pressures, and administrative practicality", *Public Administration Review*, Vol. 67 No. 2, pp. 249-264, doi: [10.1111/j.1540-6210.2007.00711.x](https://doi.org/10.1111/j.1540-6210.2007.00711.x).
- Yin, R.K. (2004), *The Case Study Anthology*, Sage, London.
- Yin, R.K. (2009), *Case Study Research: Design and Methods*, Sage, London, Vol. 5.
- Zillien, N. and Hargittai, E. (2009), "Digital distinction: status-specific types of internet usage", *Social Science Quarterly*, Vol. 90 No. 2, pp. 274-291, doi: [10.1111/j.1540-6237.2009.00617.x](https://doi.org/10.1111/j.1540-6237.2009.00617.x).

### About the authors

Prof Paolo Biancone Full professor of business administration at the University of Turin. Prof. Biancone is committed to strengthening the relationship between the University and companies in the area. He is also a Chartered Accountant registered with the Order of Turin and an Auditor. He is Scientific Head of the Observatory on Islamic Finance at the University of Turin. He heads the scientific committee of Popular financial reports in numerous cities, including Turin and Bari.

Dr Valerio Brescia is researcher at the University of Turin. PhD in Business Management at the University of Turin. He is specialised in the Consolidated Financial Statements of the municipality, accounting standards and Popular Report. However, his interest involving technology applied at accounting and management, smart city and citizen involvement. He is a member of the scientific committee of Popular financial reports in numerous cities, including Turin and Bari. Valerio Brescia is the corresponding author and can be contacted at: [valerio.brescia@unito.it](mailto:valerio.brescia@unito.it)

Dr Federico Chmet is a Research Fellow at the University of Turin. PhD in Business and Management at the University of Turin. He is expert in Public Accounting, Local Finance, Planning and Controlling Public Administrations and Non-financial Statements for Smart cities and, in general, public companies. He is a member of the scientific committee of Popular financial reports in numerous cities, including Turin and Bari.

Dr Federico Lanzalonga Research Fellow at the University of Turin and Społeczna Akademia Nauk, University of Social Science, Łódź, Poland. He is the author of multiple publications on smart cities management, business models, reporting tools, and circular economy. He is a member of the technical committee of Popular financial reports in numerous cities, including Turin and Bari.

---

For instructions on how to order reprints of this article, please visit our website:

[www.emeraldgrouppublishing.com/licensing/reprints.htm](http://www.emeraldgrouppublishing.com/licensing/reprints.htm)

Or contact us for further details: [permissions@emeraldinsight.com](mailto:permissions@emeraldinsight.com)