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To cite this article: Harri Laihonen, Anna-Aurora Kork & Lotta-Maria Sinervo (2023): Advancing public sector knowledge management: towards an understanding of knowledge formation in public administration, Knowledge Management Research & Practice, DOI: [10.1080/14778238.2023.2187719](https://doi.org/10.1080/14778238.2023.2187719)

To link to this article: <https://doi.org/10.1080/14778238.2023.2187719>



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Published online: 09 Mar 2023.



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Advancing public sector knowledge management: towards an understanding of knowledge formation in public administration

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ABSTRACT

The article proposes a novel way of conceptualising knowledge management in public sector by highlighting the social process of knowledge formation, where knowledge for public policies emerges and takes shape. This approach aims to overcome three main criticisms levelled at knowledge management, namely its excessive internal focus, solving tame organisational problems, and focusing on data over meanings. We take knowledge formation to be a social process in which information is collected, interpreted, and shared. We expand and contribute to the ongoing debate on KM in public sector by integrating insights from administrative sciences, organisation studies, and political science. The suggested approach provides an opportunity to understand the diverse conceptions regarding the role of information and the nature of knowledge in organisational decision-making and policy-making that complements the organisation-centric and instrumentalist approach to KM.

ARTICLE HISTORY

Received 22 June 2022
Accepted 1 March 2023

KEYWORDS

Knowledge formation; public sector; public administration; public management; institutional complexity; sensemaking

1. Introduction

Knowledge is widely considered to be a response to solving wicked and complex societal problems. Many governments have recently recognised the strategic importance of data, information and knowledge as resources for evidence-based policymaking and improving public sector performance (cf. Federal Data Strategy, 2022; Government of the United Kingdom, 2022). In public organisations too, knowledge management (KM) has become an example of management approaches intended to help public managers provide and choose the best possible information for decision-making.

In this study we approach KM from the strategic management viewpoint, which focuses on knowledge as an organisational resource of strategic significance. KM has many disciplinary roots (Jasimuddin, 2006) originating in the resource- (Barney, 1991) and knowledge-based views (Grant, 1996; Spender, 1996). However, both approaches have since been criticised, especially for their excessive internal focus and poor definition of resource value (e.g., Kraaijenbrink et al., 2010; Srivastava et al., 2001). The same criticism concerns KM because the discipline has evolved from these theoretical roots. Spender (2014) was concerned with the priority KM literature gives to data over meaning. Dumay (2020) claimed more recently that KM focuses extensively on tame organisational problems and Hujala and Laihonen (2021) argued that the prevailing focus on efficiency ignores other aspects

of organisational performance, such as the effectiveness of health services. Moreover, Lönnqvist (2017) took the view that the academic research on KM and the managerial practices of knowledge-intensive organisations are somewhat distant from each other, and critically analysed the relevance of KM. Also, Jevnaker and Olaisen (2022) provide a critical but constructive analysis of almost 500 conference papers in KM and show that most of the studies emphasise the existing knowledge and accepted methodology, while only less than ten percent of the papers represent new scientific contributions at all. Given this critique, there is a clear need for new theorising in KM especially to better exploit and understand the phenomenon of KM within public administration (cf. Agrifoglio et al., 2021).

Literature reviews on KM in the public sector (Dumay et al., 2015; Massaro et al., 2015) reveal that the discussion in the public context places major emphasis on issues of data production and analysis. The research has mainly applied models borrowed from the business sector, and the research has focused primarily on public service organisations or administrative sectors such as the police, education, and health care (Massaro et al., 2015). When applying these management models, little account has been taken of the special features of public administration (Laihonen & Kokko, 2020; Laihonen & Mäntylä, 2018). Although KM is closely related to the research areas of administrative sciences (Henry, 1974), the disciplines of management and public administration have

remained separate (Andrews & Esteve, 2015), which explains why the research has failed to adequately address the characteristics of public administration and its special demands for knowledge sharing.

It can be argued that in the existing KM research too little attention has been paid considering the political-administrative nature of public organisations, the interaction in public policy implementation, or complexities in defining and using knowledge across administrative sectors and public officials. To bridge this gap between research domains, our conceptual paper aims to theory adaptation (cf. Jaakkola, 2020) by expanding the scope of KM research with perspectives drawn from public administration and organisation theories. We integrate these insights to provide a novel conceptual framework with the purpose of proposing associations among the constructs to study public sector KM rather than testing the model empirically (see Gilson & Goldberg, 2015). We target our analysis at public sector KM by posing the following research question: What mechanisms determine knowledge formation in public administration? By employing the theoretical lens utilised in public administration studies, we propose an alternative approach to rationalistic and business-oriented KM and contemplate KM in public administration as a social process in which information is collected, interpreted, shared, and utilised.

The rest of the article is organised as follows: in the next section, we first identify and problematise existing premises in the existing KM literature to summarise the main criticism of KM and its theoretical roots. The third section includes a synthesis of our theoretical considerations and presents our conceptual framework for understanding knowledge formation in public administration. In section 4, to illustrate the conceptual frame, we describe how the Finnish government has put KM at the very heart of public sector strategic planning, thereby necessitating a new interpretation of public sector KM. Finally, we discuss how this alternative approach to public sector KM would broaden the conceptual scope of KM and enhance understanding of KM in public administration.

2. Three sources of criticism towards KM and its theoretical roots

2.1. Excessive internal focus

Resource-based (RBV) and knowledge-based (KBV) views of a firm examine organisational excellence and internal sources of a firm's sustained competitive advantage through rare and valuable resources. Originally RBV was developed to complement the industrial organisation view focusing on industry structure (Kraaijenbrink et al., 2010), and later KBV emphasised knowledge as the most strategically

important of an organisation's resources (Grant, 1996). Indeed, the managerial focus of RBV and KBV is on an organisation's internal resources. Knowledge-based theories (and RBV) have been criticised specifically for their excessive internal focus and poor definition of resource value (Kraaijenbrink et al., 2010; Srivastava et al., 2001). It has been argued that the theory does not address any fundamental differences in how different types of resources contribute to organisations' sustainable competitiveness (Kraaijenbrink et al., 2010; Priem & Butler, 2001).

The excessive internal focus has followed from RBV and its attempt to understand the link between organisations internal characteristics and performance (Barney, 1991). This, however, poses a major challenge in modern public administration, which is characterised by hybrid ways of governance that emphasise networks, participation, and interactions among multiple stakeholders (e.g., Fung & Wright, 2001; Johanson & Vakkuri, 2017). This may necessitate a reconsideration of public organisations' knowledge strategies as Laihonen and Huhtamäki (2020) suggest. Indeed, public value is increasingly co-created between various institutions and actors, and therefore focusing exclusively on individual actors' resources (and management practices) is not sufficient in public sector KM. Further, a more profound analysis of public sector specific resources would be needed. What resources enable public organisation, or the public sector more generally, to conceive and implement strategies that improve its efficiency and effectiveness?

2.2. Solving tame organisational problems

Subsequent to the criticism of an excessive internal focus of RBV and KBV, KM approaches have been criticised for focusing on so-called tame organisational efficiency problems rather than confronting complex societal problems (Dumay, 2020; Hujala & Laihonen, 2021). In private sector organisations, the objectives of KM initiatives are typically derived from the business objectives to operationalise performance through market-driven measures, like profitability, time to market or market share (cf. Inkinen, 2016). These business objectives form the very essence of knowledge strategy defining valuable knowledge and the processes necessary for its acquisition, sharing, and utilisation (cf. Hansen et al., 1999; Zack, 1999).

In the public sector context, the objective is to ensure the wellbeing of society and value is rather created for the citizens, who are often also the funders of the public service system. Therefore, the focus of public sector KM should be on building societal intellectual capital (Wiig, 2002), creating public value (Moore, 1995) and the success of KM is measured against the effectiveness of services (Laihonen & Mäntylä, 2018). For example, in healthcare

management this means shifting the focus from volume to creating value for patients (Porter, 2010) and operationalising this through the health policies that aim to improve the health of the population, patient experience and to lower the costs of care (Kokko & Kork, 2020). Similarly, objectives like sustainability, equality or national security can be understood as the principal goals for the public sector that call for very different decision-making information from the business objectives of private sector organisations that guide the focus of KM into inter-organisational questions (Dumay, 2020) and have been the primary focus of KM research (Massaro et al., 2015).

Indeed, it is critical for KM how the organisations' objectives are defined because it is these which will eventually determine what knowledge is prioritised in decision-making. In the political-administrative context, policymakers produce, collect, and interpret a variety of information to support their decisions. From the perspective of public sector KM, decision-makers face competing political interests, institutional logics and powers when seeking solutions to complex societal problems. They need to make sense of the situation and take a stand on determining what information is relevant for their sensemaking process (C. Currie & Suhomlinova, 2006; Laihonen & Kokko, 2020; Mischen, 2015). Thus, managing knowledge in the public sector entails the coordination of different institutional, organisational, and individual rationalities and an assessment of their value in policymaking. No single "right" perspective or optimal solution can solve societal problems on the basis of knowledge alone. To manage and achieve the desired results, it is therefore necessary to consider both the objectives set, and the means selected to achieve them (Henry, 1974).

2.3. Focus on data over meanings

Literature reviews on KM in the public sector (Dumay et al., 2015; Massaro et al., 2015) show that the discussion in the public context places major emphasis on issues of data production and analysis. This justifies the criticism regarding the blind trust of KM in rational decision-making models (Spender & Lamond, 2005). In a very similar vein, Bratianu and Vasilache (2009) show the dominant role of the linear thinking style as being rational, logical, and analytic, and argue that this may constitute a severe limitation for organisational decision-making. In practice, management is seldom based on complete information, and even if such is available, it must be applied to the prevailing decision-making situation where explicit knowledge is combined with tacit knowledge and both are interpreted on the basis of the prevailing cultural values (Bratianu et al., 2021). The main challenge for public sector KM is the ambiguity of

information, that is, how the success of the political-administrative system is defined and understood, from which perspectives its performance should be evaluated, and what kind of information is used for management purposes. The evolution of public governance models (Osborne, 2006; Pollitt et al., 2007), on the other hand, raises the question of who among the stakeholders determines what information is essential for building an efficient public administration and a sustainable society.

Public sector KM research has mainly applied models borrowed from the business sector and has focused primarily on public service organisations or administrative sectors such as the police, education, and health care (Massaro et al., 2015). Further, a strong focus has been on technology adoption and on describing how to implement technological innovations and explaining how to perform better (Agrifoglio et al., 2021). Managerialism has brought with it the idea of the ability and need to control the world, which has strengthened faith in the power of metrics to control outcomes (Eagleton-Pierce & Knafo, 2020). As a result of this faith in data, public sector KM studies have paid only limited attention to understanding the political-administrative nature of public administration, to the interaction and knowledge transfer between administrative sectors as well as the inter-sectoral and multi-professional problem-solving typical for public sector decision-making (Laihonen & Kokko, 2020; Laihonen & Mäntylä, 2018). For these reasons Massaro et al. (2015) have called for a separate research agenda for public sector KM.

Therefore, in public sector KM, to complement business-oriented and organisation-centric KM focusing on the goals and performance data of individual organisations (cf. Bolisani & Bratianu, 2017; Hansen et al., 1999), it is important also to consider the broader societal framework where data are interpreted. Indeed, instead of one truth, knowledge is ambiguous and open to different interpretations. Understood in this way, KM should be defined as a dialog (Laihonen & Mäntylä, 2017; Rajala & Laihonen, 2019) and conversations and rhetoric become essential managerial tools (Spender, 2014). It is in these dialogues and conversations where meanings are added to data, where the dots are connected, and where the social process of knowledge formation takes place, that new interpretations are constituted and adapted to the current context (cf. Nonaka & Toyama, 2003).

3. Towards an understanding of knowledge formation in public administration

Based on the above criticism towards KM and its theoretical roots it can be argued that the literature on public sector KM mostly neglects the special features of public administration. We chose to focus on public sector KM because the KM research in this

sector is limited (Massaro et al., 2015) and it has been noted that the prevailing knowledge-based approaches fail to address wicked social problems that the public sector needs to tackle (cf. Dumay, 2020; Hess & Adams, 2002; Kay, 2011). Solutions to complex societal problems invariably require a thorough understanding of the context of public management and public value-creation. Value judgements are made when defining the goals of public policies and choosing the means to achieve these goals, that is, in policy preparation, implementation, and performance evaluation. At the same time, each value judgement and decision-making situation determines what information is to be used to evaluate and manage public sector operations.

We suggest that the previous excessively internal focus, dominance of technical and data-oriented approaches, and ignorance of institutional context can be reconsidered through the knowledge formation process, in which the information available is interpreted and different arguments evinced. The administrative science perspective may help to understand how knowledge is constructed and managed in its institutional and political-administrative context. Management sciences, in turn, combines KM with the framework of strategic management and the organisation's goal-oriented operations. Both perspectives have their own path dependencies, which would explain why discussions in different disciplines do not seem to meet (Andrews & Esteve, 2015). To address this challenge, we will next outline the knowledge formation perspective on KM in public administration.

To incorporate the institutional and organisational KM approaches we construct a theoretical framework describing knowledge formation in public administration (Figure 1). The framework combines three theoretical perspectives, namely institutional complexity

(Lounsbury et al., 2021; Thornton et al., 2012), organisational responses (Greenwood et al., 2011), and individual sensemaking (Weick, 1995). We have chosen these concepts for their ability to address the main shortcomings in the existing public sector KM literature. The philosophy behind the framework is the social process of knowledge formation, in which individual meanings and collective knowledge are produced and refined in constant interaction. Knowledge formation is perceived as an iterative process, where policymakers play a key role in interpreting societal issues as well as in creating, using, and evaluating information to solve these wicked problems and giving meanings to public policy. The framework aims to help to understand public policymaking as a social process that reflects institutional complexity, where social problems are intertwined, and ambiguity of solutions prevails. Moreover, public organisations adapt their own strategies, activities, and practices to the policy objectives when aiming towards the desired change.

3.1. The institutional context and its complexity as a specific feature of public sector KM

The collective interpretation of the tasks and purposes of public administration encounters different institutional powers (Lounsbury et al., 2021; Thornton et al., 2012) that are likely to shape the meanings an individual attaches to public administration. This institutional complexity has received little attention in KM studies despite the undeniable influence of regulatory, normative, and cultural aspects on knowledge processes in public administration (cf. C. Currie & Suhomlinova, 2006). The intertwined institutional pressures produced by the varying expectations of the actors involved arise from incompatible practices, behaviours, and interpretive patterns (Greenwood

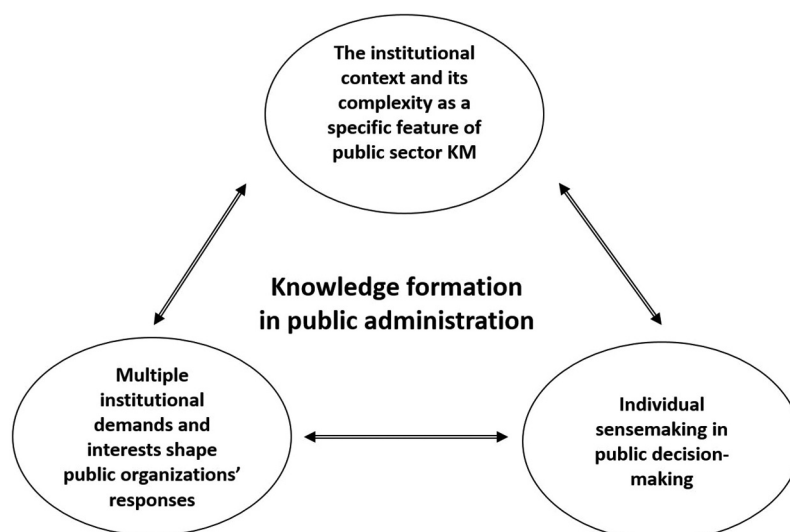


Figure 1. Knowledge formation as an interplay of institutional complexity, organizational responses, and individual sensemaking.

et al., 2011) and these institutional logics affect not only the reactions of public organisations but also the interpretations of individual decision-makers about the requirements of the operating environment. Therefore, it is important to consider not only the organisational setting, but also the impact of the wider institutional context for knowledge formation in public administration. Individual actors, communities, and organisations continuously evaluate, organise, and adapt to meet the requirements of the operating environment (Haveman & Gualtieri, 2017).

3.2. Multiple institutional demands and interests shape public organisations' responses

Within the frame described, the strategies, structures, and practices of public organisations are considered as organisational responses as these are organisational means to govern institutional complexity (Greenwood et al., 2011; Pache & Santos, 2013). These organisational responses affect individuals' sensemaking and often have a significant impact on how individuals perceive, interpret, and define the success of the organisation they represent. Again, knowledge formation, that is, the interaction of individuals' sensemaking processes in reacting and formulating organisational responses, becomes the decisive process in public sector KM. This process includes the determination of what information the future of public governance should be based on, meaning that knowledge formation in public administration, and public sector KM more generally, becomes closely linked to strategic public management (cf. Bryson et al., 2010). Therefore, instead of focusing merely on technical aspects of reporting, KM in public administration should also be perceived as a way to understand and elaborate on knowledge formation in those dialogues where multiple institutional demands, interests, and stakeholders meet and combine their views and expertise to make sustainable policy (cf. Laihonen & Kokko, 2020).

3.3. Individual sensemaking in public decision-making

In the framework, individual decision-makers (in politics or public administration) are key actors in knowledge formation as they hold the power to attach meanings and give priority to different objectives and institutional demands in public administration. Compared to private sector managers or stakeholders, public decision-makers (policymakers, public servants, or public officials) have a legislative, administrative, or juridical position. As a part of sensemaking processes, decision-makers also determine what information is deemed relevant for their decisions (Weick et al., 2005; Weick, 1995). In so

doing, by reacting and responding to institutional demands, they simultaneously shape their environment (Brown et al., 2008) and participate in the dialog, that is, collective knowledge formation, which can be utilised in imagining the future directions, to outline and anticipate possible actions while reducing the complexity of the operating environment (Abolafia, 2010; Isabella, 1990). Therefore, the framework highlights the importance of continuous dialog among actors and the narrative nature of sensemaking (G. Currie & Brown, 2003). Dialog facilitates knowledge formation through a critical analysis of one's own thoughts and collective learning, that is, listening and understanding others and their experiences (cf. Isaacs, 1999; Rajala & Laihonen, 2019; Spender & Strong, 2014).

As a result of the knowledge formation process, the mission, goals, and values of public administration take shape. To summarise the conceptual framework for understanding knowledge formation process in public administration the formulation of policy objectives is a multi-stakeholder and interactive process that combines the various interests, values, interpretations, and the expertise of key actors. The importance of conversation and dialog have been recognised in the KM literature but represent a change in how KM is understood in administrative practice. Then, KM is no mere follow-up exercise of externally defined objectives; policymakers interpret and value information in different ways. Decision-making situations attach meanings to public policy objectives and afford the means to achieve them. The information available is enriched not only through individuals' own prior knowledge and experience but also through interaction and discussions with other actors. Therefore, an important element for KM supplementing the technical process of information production becomes the collective interpretation process, in which information is construed, justified, and where the fundamental task of public administration is defined.

This joint knowledge formation can be considered as the core of public sector KM, as it seeks to build a common understanding and to define the actions and measures supporting the development of a sustainable society. Public policies and strategies are outcomes of such knowledge formation processes. In these processes, various institutions, organisations, and actors participate in the strategy work, and in the strategy process, various ideas about the future are brought into a socio-economic context where several facts constrain the strategy makers (cf. Spender, 2014). Achieving the aims of sustainable policies and public governance is a complex and ambiguous task rather than a rational optimisation problem. Next, we will briefly elaborate how the knowledge formation is evidenced in administrative practice.

4. Illustrating knowledge formation in practice

To elaborate the conceptual frame for public sector KM, we illustrate our theoretical arguments through the practical examples of recent efforts to develop public sector KM in Finland and the recognised change in the role of KM in Finnish public policy. Instead of framework validation, the examples rather aim to describe the knowledge formation process used in renewing the strategic planning and management of public governance. First, we explain the change in the focus and objectives of KM at national policy-making level, then show how this change in policy discourse has affected the strategy work and KM.

4.1. Institutional context – from internal efficiency gains to tackling of wicked societal problems

The Finnish government has shown a strong political commitment to developing KM in Finland during the last ten years. KM has become a central approach by which Finnish society and public administration at all levels seek more productive ways of providing public services. In 2011, the program initiated by the government of former Prime Minister Jyrki Katainen stated that “Productivity in the public sector will be boosted through better utilisation of business intelligence, more compatible information systems, and by bringing together information management data and procurement resources data in public administration. Shared use of public administration information will be facilitated” (Prime Minister’s Office, 2011, 137–138). At this phase the focus was firmly on improving internal efficiency and removing the obstacles to seamless information flow. The terminology used, that is, productivity, information systems and data, illustrates the rationalistic view of KM, where the focus is rather on evidence-based decision-making and what Dumay (2020) called tame organisational problems.

Later, in 2015, Prime Minister Juha Sipilä and his government also highlighted the importance of knowledge-driven decision-making and linked this to the digitalisation, experimentation, openness, and integration of services. It also stated as one of the objectives of its term in office that “Bold steps have been taken to reform management and implementation by strengthening knowledge-driven decision-making and openness and by making use of experiments and methods that encourage civic participation” (Prime Minister’s Office, 2015, p. 27). Here Prime Minister Sipilä, as a former business leader, emphasised the role of stakeholders, citizens, and companies in public value co-creation and the co-production of public services.

Transparency and stakeholder involvement clearly changed the focus from mere internal efficiency towards service effectiveness, citizens, and value for money. This also set new requirements for public sector KM both in terms of decision-making information (e.g., efficiency vs. effectiveness) and the ways in which information is to be used in public administration (e.g., top-down vs. dialogic management).

In 2019, Prime Minister Sanna Marin’s government continued the knowledge agenda in one of its pledges stating “Legislative preparation of a high quality is a key condition for the credibility and legitimacy of policy-making. We commit to knowledge-based policy-making and systematic impact assessment in all legislative preparation. We will engage in deeper cooperation with the scientific community”. (4. Pledge for knowledge-based policy-making) (Prime Minister’s Office, 2019, p. 11). This political environment has since led to several major programs and initiatives highlighting the importance of knowledge and KM in developing a sustainable society. The main objectives of this government are stated on the front cover of its four-year program: “Inclusive and competent Finland – a socially, economically and ecologically sustainable society”. From the KM perspective it has not yet been defined how these societal objectives are to be turned into decision-making information. Certainly, a new kind of information is needed, and operationalisation of these abstract objectives requires interpretation and dialog between various shareholders. The societal phenomena are complex to manage and conceptualise, and politicians, public officials as well as citizens need a wide range of information to evaluate the success and legitimacy of public operations.

4.2. Strategy for public governance as a knowledge formation process

In the fall of 2020, the Ministry of Finance and the Association of Local Authorities in Finland, published the “Strategy for Public Governance Renewal” for the first time (Ministry of Finance, 2020). The process was initiated and carried out in accordance with the program of Prime Minister Sanna Marin’s government and the strategy aims to “guide and strengthen the renewal of public governance as a whole from 2020 to 2030” (Ministry of Finance, 2020, p. 3). The need for strategy work stems from the pressures of both the operating environment and internally within government. The strategy takes a position on “the fundamental questions in society about the relationship between government and people, the meaning of public power, and the future of the democratic rule of law as a whole” (Ministry of Finance, 2020, p. 3).

The strategy process is interesting from the perspective of knowledge formation as this was the first time a strategy was created in Finnish public administration as a shared initiative of central and local government. It emerged as a result of a knowledge formation process where the available data, different values and interpretations of the purpose and tasks of public administration were debated. Indeed, the participative strategy process and the related knowledge formation were influenced by a wide range of institutional powers, stakeholder interests, organisational missions, and strategies, as well as individual values, experiences, and motives. The strategy document was a result of dialog rather than a linear and rational decision-making process.

The strategy reflects the common interpretation of public administration goals by the actors involved in the strategy work. According to the strategy paper, “the direction and means of administrative reform were defined together with various administrative sectors, municipalities, civil society, researchers and various stakeholders as a promise, goals and guidelines for public administration in the 2020s” (ibid., p.19). This role-setting process thus defined the purpose of public administration while taking a position on public administration performance targets. Through our theoretical lens of knowledge formation in public administration, the strategy process is a good example of the social process through which the idea of the future public administration was constructed collectively. As a result, the strategy for public governance renewal defines what a sustainable society is like, and what policy-programs and -initiatives are expected to lead the society to the desired future.

The strategy identifies the need for and importance of public administration reform. It promises on behalf of the entire public administration to “build a sustainable everyday life for the future and a society that works and is safe in all situations” (ibid, p.3). The goals and policies described in the strategy form the basis for administrative reform and, at the same time, the criteria by which the success of the reform can be assessed at a later stage. In the document, the importance of KM is emphasised as a prerequisite for good governance and evidence-based decision-making: “In preparing decision-making, we use not only up-to-date and researched information but also proactive information. We use and produce diverse, reliable information in administration and society even better” (ibid., p.13). Clearly the strategy acknowledges the institutional complexity present in public sector KM, and the need for diverse information to support decision-making. It mentions the “ability to imagine” and “open government” among the main governance goals, both highlighting the need for a collaborative and future-oriented approach to knowledge formation. This, however,

does not diminish the importance of evidence and careful preparatory work for good decision-making, and as an important input for the knowledge formation processes.

From the point of view of public sector KM, it is also necessary to determine with what information public administration should be managed during the strategy period, that is, to what extent the public administration has succeeded in building sustainable well-being in accordance with the strategy. For example, in the strategy, the promises of a “sustainable everyday life” and a “functioning and safe society” (ibid., p.18) require the definition and shared understanding of these concepts. The operationalisation of these goals, in turn, requires the appreciation of different perspectives at and between central, regional and local government levels. This valuation is made in defining the goals of public action and the means to achieve the goals, in policy preparation, implementation, and performance evaluation. At the same time, decision-making will determine what information is used to evaluate and manage operations.

5. Discussion – from data to shared meanings in public sector KM

The rational models of KM put strong emphasis on data and information production in order to achieve the desired organisational change. As long as KM is considered a synonym for information production and management its true benefits will not be attained.

The main argument of this article is that too often the meanings and interpretations of the decision-maker regarding the information are omitted from the equation. We argue that the overall problem of KM – and especially in the context of public administration – hardly concerns the means of producing more information for decision-makers. Instead, a key issue in public sector KM is that of understanding the political-administrative nature of decisions and the interactive process of policy implementation. Therefore, it becomes essential to describe and understand those processes by which policymakers select, apply, and make sense of the information in resolving societal problems in specific decision-making situations. An adequate information base is certainly needed for evidence-informed decision-making, but the mental models and schemas that guide the selection and interpretation of the information used are at least as important for preparing and evaluating the choices and results of these decisions – and for developing KM in public administration.

According to the proposed conceptual framework for studying public sector KM, knowledge is continuously reformed under the influence of institutional powers, organisational strategies, and individuals’ sensemaking. Balancing policy objectives and

administrative practices is a perennial governance problem (March & Olsen, 1995). It concerns decision-makers at all levels of public administration who are responsible for turning policy ideas into concrete actions. Their tasks include defining, selecting, and utilising the relevant information for making choices to achieve the desired results and change (Stewart, 2004). The framework proposed and its underlying idea of knowledge formation in public administration include three significant transitions in how KM is perceived in public administration.

First, by accepting the bounded rationality of decision-making (Simon, 1947) it emphasises meaning over data (Spender, 2014). Hence, instead of considering knowledge as an instrumental resource that can be stored and transferred, it is taken as a result of an individual and organisation's interpretative process, where meanings are associated with data and information (Albino et al., 1999; Huber, 1991; Weick, 1995). Thus, the future direction of public administration is constructed in this knowledge formation process where policymakers make judgements regarding the relevant information within the constraints of the prevailing situation (cf. Spender, 2014). Although information (and data) helps in reducing the uncertainty of the decision-making situation, managerial judgement is the decisive factor in the knowledge formation process. This is consonant with the strategic public management rhetoric (Osborne, 2006; Pollitt et al., 2007). The problem is mainly related to how the KM discourse is operationalised in the public development agenda. Despite the reform rhetoric, KM in public sector is still interpreted primarily as a technical process reporting performance in achieving predetermined goals. Such an instrumental and mechanistic approach to KM in public administration has been facilitated and increasingly supported by technological developments and digitalisation. As a result, to solve the complex problems and support decision-making, policymakers are being taught and encouraged to ask for more facts and evidence (data), even if it is conceded that complete rationality is an illusion.

Second, to escape the problem of organisation-centricity in KM, the framework focuses on collective sensemaking and the interaction arising therein rather than on an attempt to outline an organisational structure and practices for directing KM activities to achieve organisational goals. This affords a novel heuristic for approaching KM in public administration. Whereas organisation-centric KM links knowledge to a pre-defined unit of analysis (typically an organisation) and its strategic objectives (see Laihonon & Huhtamäki, 2020), focusing on knowledge formation allows the observer to perceive the ambiguity of information and the interactive relationship between the collective knowledge and

decision-making that are so essential in public policymaking and in implementing the policy goals. Also, the approach proposed acknowledges the presence and impact of various institutional powers that guide the perception of KM, the measures taken and the development and selection of concrete methods and tools in public sector KM (Laihonon & Kokko, 2020). Excessive organisation-centricity and ignorance of the institutional context may lead to sub-optimising solutions in KM, which hinders integration of knowledge and services. The practical problems of KM are far more often related to the dynamics in generating common knowledge than to producing or compiling the necessary data. Of course, the knowledge formation described requires raw data, but above all it combines and utilises a huge amount of collective knowledge: different views, experiences, and know-how.

Finally, the framework acknowledges the diverse ontological and epistemological approaches of KM. The discussion presented brings out the interdisciplinary tensions and differences in conceptualising the issue of what is being managed (organisational efficiency vs. complex social problems). This is also a question and an outcome of different research traditions and interpretations of how knowledge is constructed. The mainstream models of KM rely heavily on positivist perceptions of knowledge and rational decision-making. The ontological basis in the social sciences, in turn, can often be found in social constructionism, where action is understood as heuristically, culturally, and historically constructed. In organisational sciences, too, action is understood in terms of collective action and the interpretations of the actors involved (Czarniawska, 2014). In our framework, public policies as well as administrative and organisational practices are seen as socially constructed; the interpretations are invariably influenced by the institutional environment (Hay, 2011; March & Olsen, 1995). Accordingly, knowledge is constructed in social interaction and knowledge formation is influenced by the context and the chosen perceptions.

The social process of knowledge formation reconciles the ambiguity of information, societal values, and goals. In the same process, a conception of what public administration is and is intended to be will be created and shaped. Here, we recognise a link to the discussions on the identity of public administration (e.g., Simpson & Hibbert, 2008; Wæraas, 2010; Zalmanovitch, 2014). Indeed, in the knowledge formation process, the agency of public administration and its multiple identities are constantly evolving in a dialog between different institutional forces, organisational actions, and actors' sensemaking. At the same time, in each decision-making situation an understanding of the many purposes and identities of public administration is built and operationalised. In this

knowledge formation process, public administration reinvents itself and is constantly reformed. Through the interaction and empowerment of actors, there emerges an idea of the identity of public administration, describing what it is like and what it should achieve.

6. Conclusions

Our novel perspective on and contribution to the public sector KM literature is to highlight the interactive and iterative nature of knowledge formation and thereby respond to the criticism levelled at the rationalistic and technocratic KM approaches. We expand and contribute to the ongoing debate on KM in public administration by integrating insights from administrative sciences, organisation studies, and political science. The framework proposed for studying public sector KM illustrates the social process of knowledge formation, where knowledge for public policies emerges and takes shape. Our approach provides an opportunity to understand the diverse conceptions regarding the role of information and the nature of knowledge in organisational decision-making and policy-making that complements the organisation-centric and instrumentalist approach to KM. By conceding the bounded rationality of decision-making and the ambiguity of information, our framework can be applied to examining KM in cases of complex and wicked problems typical of public policy and administration.

Turning the focus to knowledge formation process leads to a thorough repositioning of KM in public administration. By making visible the processes of individual sensemaking in knowledge formation, we can understand the KM processes better, and find new and adjust existing decision-making methods and structures to meet managerial needs. In practice there are institutional, technical, or legislative obstacles that delay the development of public sector KM and, at worst, prevent knowledge sharing and collective decision-making. However, from our perspective, these barriers often stem from the problems of the instrumental models of KM discussed in this article. Therefore, a better understanding of the institutional context is indispensable for effective KM in public administration.

For future KM strategies and policies, the approach proposed may offer new avenues for understanding and studying how actors construct the purpose, values, goals, and tasks of public administration. The future of public administration evolves in interaction, through conversations and dialog, and in setting public policy objectives and assessing the performance of public management. Thus, knowledge formation is influenced by many institutional factors and intertwined pressures, such as political-administrative positions, institutional histories, and

power relations between professions. This could be the focus of future public sector KM research; it would be fruitful to explore, for instance through narratives, how individual decision-makers attach and associate meaning with public administration, and how institutional requirements regarding performance influence and shape knowledge formation in public organisations' strategies.

Disclosure statement

No potential conflict of interest was reported by the authors.

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