A Model of Knowledge Management in Parliament. A Quantitative Study for Europe

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Abstract

Despite being the fundamental pillar of our democratic systems, there has been a notable scarcity of research on knowledge management within parliamentary settings. The few existing approaches fail to consider the unique structure of parliaments and the challenges newly elected members face. Previous research concluded that knowledge in parliaments still tends to be tacit, informal, and not recorded. In view of the multitude of highly knowledge-intensive crises in the last decade, the need for political knowledge management becomes apparent. This paper investigates how members of the national parliaments in Europe manage their knowledge relevant for policy-making, using original data collected in a quantitative online-survey in mid-2023. I was able to show that both organizational and cultural barriers hinder good knowledge work and that a systematic approach is still not being pursued. I come to the conclusion that modern politics lacks sufficient resources and know-how to adequately evaluate and apply the flood of information in everyday business. This deficiency is especially detrimental to inexperienced MPs and members of the opposition. Building on these findings, a proposed model for political knowledge management is presented. The central pillars are, on the one hand, the creation of awareness, the formulation of a knowledge strategy, the more intensive integration of external expertise and the establishment of IT support.

Keywords: Data, information, knowledge management, Member of Parliament, policy making, public administration.

JEL codes: D72, D83

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1 Prof. Dr. Jan Frait
1. Introduction

The relevance of knowledge in today's information society and in particular within the political system should be self-evident. Politicians, public administration and governments are in continuous need of current, valid, and serious information (e.g., demographic trends, tax revenue, demoscopic data towards public opinion, etc.) for situation analysis and decision making (Felfoldi and Donoso, 2012). Parliaments in particular play a central role here, as they have to process a large amount of information in order to pass laws or carry out their supervisory duties towards the executive branch. In this way, they simultaneously create new information and "raw data" for the general public and also incorporate knowledge from external sources (Rizzoni, 2021). Thanks to a globally networked scientific community and modern telecommunications technology, political leaders now have more data and information at their disposal than ever before (Foxen et al., 2020). The numerous crises of the last two decades in particular have exposed deficits here. Siriopoulos (2021) laments about the financial illiteracy that exacerbated the financial crisis of 2008. Bratianu and Bejinaru (2021), in turn, point to the knowledge gap in dealing with the Covid pandemic. It is therefore in the public interest that knowledge is not only universally available to parliamentarians, but is also used in the best possible way.

It is therefore surprising that both economic and political science in the Western world have long ignored this subject. Recognized models such as the public choice theory or the Austrian school of economics offer approaches to explaining political decision-making processes, but neglect knowledge as a resource. In contrast, the knowledge management discipline developed by Nonaka and Takeuchi (1995) since the 1990s has laid the groundwork for further fields of study.

However, with regard to the public sector, the current existing literature focuses mostly on marginal aspects, like specific policy fields (Fuhr and Gabriel, 2004), local municipalities (Martin, 2003) or public administration departments (Kasim, 2008), but leaves a research gaps with regard to parliaments.

Although critical voices have increased in recent years (Nakash & Bouhnik, 2021), this paper represents the viewpoint that knowledge management has the potential to significantly improve work and decision-making processes in the political system. Indeed, parliaments would represent an insightful study field as the key institutions of a democratic system, since they are characterized by sophisticated, knowledge-intensive duties, cultural barriers (Cong and Pandya, 2003), as well as high fluctuation due to the variety of elections, which often results in the election of inexperienced politicians or deselection of long-term parliament members respectively (Coghill et al., 2008).

In Mittelstädt (2022) I presented a case study on the German Bundestag, contributing to the understanding of how parliaments and its members collect, use and archive their personal knowledge in terms of policy making. This was, to the best of my knowledge, the first time, that knowledge management of MPs was explicitly studied. I was able to show that there is neither a uniform and stringent KM system nor understanding of its importance. Building on that, this paper aims to extend the research process within the framework of an international comparative study to provide a first model for a political knowledge management system. The empirical analysis is based on original survey data collected from currently active MPs in mid-2023 from all EU member states. A total of 218 MPs from all over Europe answered my survey. Knowledge management and its application in parliaments are outlined in chapter 2. Following a
presentation of the methodology and data collected, the results are discussed in the fifth chapter.

My results as presented support the thesis of insufficient knowledge management in parliament. Almost 70 per cent of those surveyed stated that they found the handling of knowledge as a resource to be critical. At the same time, a vast majority confirmed that both organizational and cultural barriers unnecessarily impede or completely prevent functioning knowledge management. This is regrettable, as there is good reason to believe that good knowledge work can contribute to better political output. My survey also showed that MPs mostly do not follow a structured system with regard to their personal knowledge management. Instead, this task is delegated to personal employees. Although many parliaments provide professional assistance, which the Members of Parliament regularly make use of, the question arises as to whether these instruments are sufficient to carry out the core task of an MP – the legislation process and steering the government.

Studies show that the ability to understand complex political concepts is critical to the success of representative democracies (Jaeger et al., 2016). The suggestions made below for a political KM system could help to reduce the deficits identified and create a new awareness of the value of knowledge for policymaking.

2. Theoretical background

2.1. A critical review of knowledge management

The management of available knowledge has been an issue in both economics and business practice for more than thirty years by now (Nakash & Bouhnik, 2021). So far there is no uniform definition. Bolisani and Bratianu (2018) rightly point out the difficulty of an exact definition of the concept of knowledge and its separation from suburban data and information. Davenport and Prusak (2006, p. 4), two founding fathers of the discipline, define “knowledge as a fluid mix of framed experience, values, contextual information, expert insight and grounded intuition that provides an environment of, and framework for, evaluating and incorporating new experience and information. It originates and is applied in the minds of ‘knowers’. In organisations, it is often embedded not only in document repositories but also in organisational routines, processes, practices and norms.” The need for both public and commercial companies to use this knowledge more effectively and efficiently led to the emergence of knowledge management (KM) as a separate scientific field (Serenko & Bontis, 2023). In terms of KM, this paper will use the following definition based on the analysis of Girard and Girard (2015, p. 14) of existing approaches where knowledge management is understood as “the process of creating, sharing, using and managing the knowledge and information of an organisation”.

The foundations of scientific knowledge management began in the 1990s with the work of Nonaka and Takeuchi (1995). They asked themselves why Japanese companies, although neither particularly efficient nor entrepreneurial, have been able to build up such a strong position on the international markets over the decades. They argued that this was because Japanese companies were particularly adept at creating entrepreneurial knowledge. This means the ability to generate knowledge, make it available throughout the organization and ultimately translate it into products or services. Franken (2002, p. 7) identifies structured, unstructured, personal, and collective knowledge as the main forms. These typifications make the different degrees of accessibility to knowledge visible.
Nonaka and Takeuchi (1995, p. 74) speak here of explicit and implicit knowledge. Both forms of knowledge are understood as complementary to each other. Through social interaction, knowledge is transformed which creates new knowledge. Researchers in information technology, psychology, economics, philosophy, information technology, strategic management, and organizational science have all contributed to the subject of management (Nakash and Bouhnik, 2021).

While much of the literature focuses primarily on knowledge management in the private sector, there are currently several case studies and approaches looking at the public sector as well. Comparative studies show that, due to the pressure to reduce budgets and to work more efficiently, knowledge management seems to be more developed as a management philosophy in the public sector than in private economy (McAdam & Reid, 2000). These advances are an expression of a reform movement that has lasted for almost forty years. As the so-called New Public Management reforms – which emerged in the early 1980s in an attempt by the conservative government in the United Kingdom to increase public services efficiency by using private sector management models – progressed, the awareness of the benefits of managing knowledge grew (Cong & Pandya, 2003). In particular, the National Performance Review (NPR) Act of the Clinton administration in the early 1990s gave an important impetus to the modernization of public administration. For Arora and Raosaheb (2011, p. 239) it can therefore be seen as one of the most important reforms of the twentieth century.

However, the differences in structure and tasks between the economic and public sectors do not allow a simple transfer of KM measures (Hasler Roumois, 2013). Unfortunately, there is no general overview of knowledge management in the public sector so far. Given the enormous need for knowledge in public institutions driven by today’s information society, globalization and crises of all kinds, it appears extremely advisable to conduct more research in this field. However, the OECD publishes annual reports and numerous case studies on KM practice in both the private and public sectors (Saussois, 2003). These show that within the OECD member states around two-thirds of all government agencies are making efforts in this field. Beginning with the strengthening of awareness, through further training of the staff to the purchase of special KM systems (OECD, 2003). The far-reaching changes caused by the introduction of e-government systems should certainly be emphasized here. E-government means a government “that uses IT and e-commerce to provide access to government information and delivery of public services to citizens, and all other business partners and stakeholders including private sectors” (Arora & Raosaheb, 2011, p. 240). Wiig (2002) also emphasizes the importance of IT-supported knowledge work, which, however, is never sufficient on its own. Rather, it must be applied in an open culture and supported by trained employees. This trend led to a real explosion of scientific publications, particularly in the early 2000s, especially “since a significant portion of KM research is published in non-KM journals. This is because – unlike other fields – the KM field has no clear boundaries” (Arisha & Ragab 2013, p. 2).

But today there is also increasing criticism. Davenport (2015) himself asked whether KM was dead because interest from science and business had waned significantly. He also stated that they had neither managed to initiate a real cultural change nor develop easy-to-use technology. Heisig et al. (2016, p. 1169) add that the discipline has not yet been able to demonstrate the extent to which it can specifically contribute to business value creation. And in fact, studies showed that the literature was primarily theoretical in nature, while there was a gap on the practical application side.
(Arisha & Ragab 2013). Various other theories have developed ever since, although for reasons of capacity these can only be briefly mentioned here:

- **Connectivism**: This philosophy of learning places a strong emphasis on the use of digital tools and networks for education. According to this idea, learning is the process of creating and traversing networks, and students should be capable of efficiently searching, assessing, and integrating the information found in a digitally networked environment (Goldie, 2016).

- **Design thinking**: An innovative approach to problem-solving that strives to provide solutions that are focused on the needs of people. It highlights how crucial empathy, teamwork, and experimentation are to coming up with novel solutions to challenging issues. Organizations are using design thinking more and more as a strategy for knowledge organization and innovation (Dell’Era et al., 2020).

- **Agile learning**: Originally created for software development, agile approaches are being used more and more in project management, product development, and education. Agile techniques are well-suited to handle the quick changes and uncertainties that develop in modern businesses because they place a strong emphasis on flexibility, collaboration, and iterative improvement (Armanious & Padgett, 2021).

- **Learning Organizations 2.0**: To adapt to the demands of the digital era, the idea of learning organizations has changed. It encourages information exchange, teamwork, and ongoing learning across corporate boundaries by utilizing platforms and technology (Mak & Hong, 2020).

- **The idea of data-driven learning**: As a result of the growing amount of data that is available in businesses, this viewpoint places a strong emphasis on the application of data analysis and visualization to enhance learning interventions by providing insights into learning processes and results (Chambers, 2010).

This paper represents the position that, despite justified criticism, knowledge management does have potential, far beyond theoretical considerations. I am convinced that recent technical innovations in the field of artificial intelligence (Jarrahi et al., 2023) will bring new momentum to the debate. But instead of continuing to focus on public administration institutions, this paper will concentrate on parliaments, which for a long time were hardly taken into account by KM research. This is unexpected because parliaments are highly information resource dependent entities due to their constitutional duties and responsibilities. To fulfil their core roles within legislation and governmental control, information and knowledge are crucial components (Boltmann & Bankole, 2017).

The ground-breaking book "Developing and Implementing Knowledge Management in the Parliament of Finland" was published by the Finnish Parliament Committee for the Future in 2002. It highlights the significance of knowledge management for democracy and economic growth while also outlining a knowledge management strategy for the legislative context (Felfoldi & Donoso, 2012, p. 1). A few years later, the Federal Government Plan (PPA) 2004-2007 presented by the Brazilian Government included a programme for Knowledge Management, obliging all federal policies to implement e-gov procedures, “such as inter-institutional learning networks, strategic approaches to information and the use of information technology” (Mendes et al., 2004, p. 2). One of the
first comprehensive studies was carried out by Mingmitr (2016) on the Thai Parliament in 2016, where he applied various success factors for good KM mentioned in the literature to the Thai parliament.

Although there is currently still a lack of meaningful literature on KM at the EU level, the Commission under Jean-Claude Juncker has also recognized the need and the advantages. A High-Level Reflection Group of Directors-General issued a report in June 2015 describing the guiding principles, immediate and long-term projects, and governance processes for a company data, information, and knowledge management policy (European Commission, 2016). The Joint Research Centre (JRC) is one of the central pillars of European knowledge management. It initialized the “Knowledge Management for Policy (KMP) initiative”, which works to maximize the value of science and is at the heart of the science-policy interaction, is entrenched inside the Commission and draws on approximately 2000 research workers to create information that supports most policy domains (Topp et al., 2018). The centre’s primary responsibilities include knowledge generation and management to provide impartial evidence to support European policies as well as anticipating new concerns that must be handled at the EU level.

2.2. Political decision-making

Despite the previous statements, it must be noted that the overall understanding of how to deal with the knowledge resource within parliaments is still inadequate. A research gap must be identified, particularly with regard to the actual decision-making level, the elected representatives. This is an astonishing finding for several reasons. One would have to assume, firstly, that public interest in functioning parliaments is so great that there would be a certain pressure for dedicated research. Secondly, one should also be able to assume a scientific interest, primarily from political science itself, in order to better understand the internal workings. Finally, there is a third reason, namely an obvious need for tools for better knowledge work in the face of a number of deficits.

The still young 21st century can already look back on a long series of crises. Whether it is climate change, the ageing of society, poverty, hunger, international terrorism, the depletion of natural resources, the Covid pandemic or the Russian war of aggression against Ukraine and the streams of refugees associated with it (Choudhary et al., 2022), crises affect all areas of our society and have a significant impact on our actions and decisions.

It is clear that such events require a quick and well-thought-out reaction from legislators. However, this can or must also take place on the basis of an appropriate knowledge base that must be created, evaluated, adapted and applied. Various recent studies have addressed this topic. Sundblad et al. (2009) assess the level of knowledge of policy makers in England regarding climate change, while Clark et al. (2007) did this for Canadian health research policymakers. Although such studies provide helpful insights – particularly about existing knowledge deficits – they often fail to take the next step of explaining these gaps or even presenting a solution. Studies such as those by Coghil et al. (2012) are an exception here, as they offer a descriptive overview of the current state of knowledge on formal and informal capacity building programmes for MPs.

Nevertheless, the overall picture remains unsatisfactory and previous theoretical approaches are also inadequate:

- The institutionalist theory: Political decisions are considered in the context of the given institutional structures in which politicians operate. Institutions such as
laws, constitutions and political traditions influence the decision-making processes. Knowledge is practically ignored here (Guy Peters, 2022).

- Public choice theory: This theory states that politicians make decisions based on rational considerations to maximize their own goals. They take into account the costs and benefits of various alternative courses of action (Mengiste, 2020).

- Elite theory: According to this theory, political decision-makers are influenced by elites who have resources and power (Vakilifathi 2020). Politicians may therefore make decisions that serve the interests of these elites rather than the interests of the general despite a better knowledge-base.

- Path dependence theory: This theory argues that past decisions and events influence the decision-making process of politicians. Politicians could therefore follow established paths and strategies instead of pursuing alternative approaches. However, this theory is heavily criticized due to its deterministic structure, which does not allow for change and development (Sydow et al. 2019).

Although some promising case studies primarily focusing on Asian countries have been published in the last ten to twenty years, these often fail to discuss or even properly realize the unique structure of parliament administrations, parliamentary groups and Members of Parliament (Gaffoor & Cloete, 2010). First of all, a parliament or its members are not a homogenous group, but divided – sometimes even shattered – into various sub-groups including government and opposition, coalition fractions, and regional or sociological groups (Rudzio, 2015). There is no professional counterpart where a group of people with drastically different backgrounds and skill sets are expected to do challenging new jobs without any prior professional or educational training (Orton et al. 2000, p. 216). There are institutions installed within most parliaments, such as libraries or research and documentation services, but these facilities normally use public information only. As Ahamed, Amarakoo and Senevirathne (2015, p. 4) point out, “knowledge in Parliaments tends to be tacit/informal and not recorded.” In addition, MPs vary considerably in terms of their professional background, so neither the awareness of nor the ability to manage knowledge can always be expected. Furthermore, it appears unlikely that MPs would be willing to share their knowledge with their colleagues or the public since politicians are constantly fighting for their re-election (Brancati et al., 2022).

Given the ever-growing need for information and fast decision-making because of globalization, demographic change, and crises (Cong & Pandya, 2003), the need of parliaments and its members for proper knowledge management is obvious. A variety of circumstances might drive an organization to develop a formal and systematic knowledge management system. These include the desire or need to: (a) get a better understanding of how the organization operates; (b) save time and effort searching for information and documents; (c) minimize mistakes and needless duplication of labour; and (d) reduce the time it takes to respond to questions (Ahamed, Amarakoo and Senevirathne, 2015). As the work of Willis (2018: 486) shows for climate policy, how the politicians approach complex topics “is influenced by their understanding of scientific evidence, but also by their professional identity, their concept of their role as a representative, and the way they navigate the day-to-day realities of life as an MP”:

- Identity: our values, opinions, and actions are highly conditioned by social and cultural contexts (Lawler, 2014). Parliaments can therefore be seen as “collections of interrelated rules and routines that define appropriate actions. [...] When
individuals enter an institution, they try to discover, and are taught, the rules (Chappell 2006, p. 161).”

- **Representation:** The relationship between elected representatives and those they represent, which is intensively studied in political science in particular, is a complex field. Classically, it can be divided, for example, according to social classes, educational groups, age groups, gender, or nationality (Petit, 2010). However, the danger here is that the representation of individual groups leads to a narrow perspective that, in the worst case, rejects knowledge that speaks against one's own interests.

- **Working practices:** Contrary to the media portrayal of political processes, “ethnographies of Parliament and government show that politicians spend their days in a fast-paced blur of meetings, actions and reactions” (Willis, 2016: 479). In fact, time pressure is a pervasive problem for politicians and has now even been recognized as a health risk (Flinders et al., 2020). This is more than harmful, especially for good knowledge work.

I therefore contend that maintaining an informed and efficient government depends much on the calibre of the information influencing and flowing into the decision-making process (Orton et al. 2000, p. 207). Evaluating and applying these is therefore a key qualification for MPs, but the requirements cannot simply be taken for granted.

### 3. Methodology and Data

As the previous literature analysis suggests, knowledge work in parliament is unsystematic in the sense of KM. This is also consistent with the assumption of Boltmann and Bankole (2017) who state that knowledge is recognized as a strategic asset in parliament, but it is mostly disseminated in an unstructured, informal way that is unrelated to a parliament’s strategic aims. However, dedicated data sets are missing for more in-depth analyses. Therefore, the research question is: To what extent is systematic knowledge management used by MPs in Europe? The aim is to get an overview of the knowledge management situation of MPs in order to identify both structures and deficits in order to present initial proposals for a political KM system as a next step. It is my strong belief that legislatures could benefit from the establishment of such a system in various ways. The research project consisted of a quantitative and a qualitative part, although this paper will rely on the quantitative results only. For operationalization, I have formulated nine sub-theses. For reasons of capacity, only three selected theses will be discussed in more detail here, since they represent the core idea of this study:

- **Knowledge in parliament is diverse.** It is not stored and managed in a central location. On the contrary: Many institutions are intent on restricting access to their knowledge. A lot of knowledge comes from internal discussions that are not formalized. There are no explicit rules for organizing knowledge. 

  \( H1. \text{Knowledge in parliament is implicit and unorganized.} \)

- **Parliaments, as complex and hierarchical organizations, may face several challenges when it comes to knowledge management.** These barriers can include information silos, lack of infrastructure and skilled staff, and limited resources.
Furthermore, cultural aspects within a parliament can significantly impact the success of knowledge management efforts. They may include resistance to change, a lack of knowledge-sharing culture, as well as too rigid hierarchical structures (Long & Fahey, 2000).

**H2. The use of knowledge management in parliament is hampered by organizational and cultural barriers.**

- Members of Parliament decide on government bills and have far more far-reaching rights themselves. Members can make inquiries to the government or the commission, formulate their own bills and bring them to parliament. A wealth of knowledge makes this task much easier.

**H3. MPs who use knowledge management methods and instruments will have an advantage in their ability to make informed decisions on legislative issues.**

### 3.1. Research Design

Although the public sector is now also increasingly the focus of research in relation to knowledge management, studies on parliaments, specifically with a focus on MPs, have so far only been carried out to a very limited extent. Flanagan (2013) sums it up nicely by saying that “[t]he scientific method is the most powerful tool yet devised for discovering truths about the world.” Since this research work will deal in part with a practically unexplored area, namely the linking of knowledge management with the work routines of Members of Parliament, it is unlikely that any single research method alone will be able to provide the desired insights. In addition, quantitative research has limits in terms of explanatory power and flexibility. Capturing the respective context seems particularly desirable. For this reason, it was decided to pursue a mixed-methods approach for the overall study. As part of a deductive approach, a quantitative study is supplemented by qualitative expert interviews (Pohontsch, 2019). Qualitative research offers the advantage that small samples are sufficient to obtain in-depth insights into particularly subjective topics. Nevertheless, for capacity reasons, this paper will focus on presenting the quantitative results as the interviews are not essential at this stage.²

A strength of this study is that it is based on primary data. The analysis of existing studies shows that attempts have often been made to copy economic approaches, which, as already explained above, is not easily possible. It should be noted critically that, as far as I know, the decision-making level, i.e., the elected Members of Parliament, has been completely neglected. Primary data can therefore provide incisive insights. Building on Mittelstädt (2022), where KM of German MPs was examined as part of a case study, an international data set was created. This approach offered the advantage of allowing national comparisons by significantly expanding the data set.

Online survey tools are often used in quantitative research to generate large samples. Since it is feared that the target group addressed will be very difficult to reach and motivate to participate, this tool also seems suitable because it is easy to use and the inhibition threshold is low. I designed a questionnaire consisting of twenty-seven questions. These were divided into five categories: general assessments, cultural dimension, employees, application of knowledge work and personal information. This limitation was absolutely necessary since the response rates for online surveys are

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² The qualitative results will be discussed in detail in a separate publication.
generally very low – especially compared to paper surveys, which have on average a response rate of around 50 per cent, while only 33 per cent reply online (Nulty, 2008) – and it is to be feared that the number will be even lower for the target group in particular. Therefore, all hurdles, such as in particular the time required, had to be minimized. Both the questionnaire and the data-set are freely available on figshare.com.³

The online tool Soscisurvey, which offers extensive options for designing and evaluating surveys, was used as the platform. The questionnaire was offered in English, German, Spanish, French and Czech. This selection covers four of the most widely spoken languages in the EU; Czech was added to include an Eastern European language. The fear of bias in the answers cannot be dismissed out of hand. Members of Parliament are likely to be older on average, and a relatively high level of education and the associated multilingualism can also be assumed. The path chosen should represent an acceptable compromise. Recruiting study participants posed a particular challenge. In May 2023, I sent emails in English to all Members of the national parliaments in the European Union. In my opinion, this represented a good compromise of the need for a personal, direct approach and the high amount of work involved. The addresses were publicly available on the internet. Only the parliaments of Croatia and Portugal did not offer this, so the contact forms of the MPs were used via the central parliament website. It should be noted that for all parliaments, several messages could not be delivered. The reasons may have been of a technical nature or based on personnel changes. Since they were between two and four per cent each, they can be neglected. The offices occasionally replied that they generally do not take part in scientific surveys. Without exception, this was justified by the high number of such inquiries. I received a few e-mails with specific questions about individual sections of the questionnaire, about technical terms or the translation. In total 7,083 people were contacted. A conscious decision was made not to involve the staff. On the one hand, this would have shifted the focus and, on the other hand, it would not have been feasible. An overview of the persons addressed is shown in Table 1.

Table 1: Overview of MPs addressed

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of MPs</th>
<th>Number of answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>183</td>
<td>20</td>
</tr>
<tr>
<td>Belgium</td>
<td>150</td>
<td>3</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>240</td>
<td>2</td>
</tr>
<tr>
<td>Croatia</td>
<td>151</td>
<td>1</td>
</tr>
<tr>
<td>Czech</td>
<td>56</td>
<td>0</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>200</td>
<td>10</td>
</tr>
<tr>
<td>Denmark</td>
<td>179</td>
<td>1</td>
</tr>
<tr>
<td>Estonia</td>
<td>101</td>
<td>0</td>
</tr>
<tr>
<td>Finland</td>
<td>200</td>
<td>2</td>
</tr>
<tr>
<td>France</td>
<td>577</td>
<td>0</td>
</tr>
<tr>
<td>Germany</td>
<td>736</td>
<td>24</td>
</tr>
<tr>
<td>Greece</td>
<td>300</td>
<td>1</td>
</tr>
<tr>
<td>Hungary</td>
<td>199</td>
<td>2</td>
</tr>
<tr>
<td>Italy</td>
<td>630</td>
<td>6</td>
</tr>
</tbody>
</table>

³ https://doi.org/10.6084/m9.figshare.25295413.v1
Hypothesis 1, which states that knowledge in parliament is implicit and disorganized, is basically a simple yes-no question if the MPs agree with the statement. For the analysis, the inverse items are recoded and then the mean score of the scale is formed. This hypothesis is checked descriptively through a direct query of the assessment (Table 2).

Table 2: Operationalization of Hypothesis 1

<table>
<thead>
<tr>
<th>Item</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation of the thesis</td>
<td>1 item, on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree)</td>
</tr>
<tr>
<td></td>
<td>2 items yes/no</td>
</tr>
<tr>
<td></td>
<td>mean score</td>
</tr>
</tbody>
</table>

Hypothesis 2 formulates a negative correlation between the use of KM and the presence of cultural or organizational barriers. The former is queried by an extensive query of the usage behaviour of various KM methods and the formation of an average. The latter are formed through various questions about organizational procedures and perception of working practices within parliament. This includes aspects such as individualism versus team spirit (Table 3).

Table 3: Operationalization of Hypothesis 2

<table>
<thead>
<tr>
<th>Item</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of Knowledge</td>
<td>8 items, on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree)</td>
</tr>
<tr>
<td></td>
<td>mean score</td>
</tr>
<tr>
<td>Cultural/Organizational</td>
<td>2 items, on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree)</td>
</tr>
<tr>
<td>barriers</td>
<td>3 items, yes/no</td>
</tr>
<tr>
<td></td>
<td>mean score</td>
</tr>
</tbody>
</table>
Third and lastly, the thesis was put forward that those MPs who actively use KM produce a better output. The difficulty here was the operationalization of policy output, which was primarily attempted through self-assessment by the MPs (Table 4).

Table 4: Operationalization of Hypothesis 3

<table>
<thead>
<tr>
<th>Variable</th>
<th>Item</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent</td>
<td>KM use</td>
<td>8 items, on a 5-point Likert scale (1 = no use, 5 = high use) mean score</td>
</tr>
<tr>
<td>Dependent</td>
<td>Policy output</td>
<td>7 items, on a 5-point Likert scale mean score</td>
</tr>
</tbody>
</table>

3.2. Data

Of the 7,083 members of the European National Parliaments, 535 people clicked on the questionnaire. In fact, a total of 218 people, or around 3.08 per cent, responded to my inquiry and answered my questions. Around two-thirds filled out the questionnaire completely. This response rate is certainly far too low, but it was to be expected. Inadequate feedback rates, especially in email-based surveys, are a widespread problem and have long been discussed with regard to their consequences for the validity of research results (Hikmet & Chen, 2003). I will take a closer look at this aspect at a later point in time, so at this point, I only want to point out that all the results presented here are to be seen with reservations.

The evaluation and graphical representation of the data were carried out with the statistics program JASP (Version 0.17.2.1), which in turn is based on R as open-source software. It should start with a brief overview of the group of participants. The hoped-for broad coverage of political parties has been achieved. Figure 1 shows the political division from very left (1) to very right (7). Most nations could also be reached, with clear focal points in German-speaking countries. Additional socio-demographic data such as education, gender, etc. were not asked in order to keep the questionnaire as short as possible and because these data were not considered absolutely necessary.
4. Results

4.1. Test of Hypothesis 1

To test Hypothesis 1, MPs were asked to what extent they agreed with the statement that knowledge in parliament was disorganized and tacit. Response options ranged from "strongly disagree" (1) to "strongly agree" (5). As a result, one third agreed (=4) or fully agreed (=5) with the statement (Table 5).

Table 5: Frequencies for unorganized and implicit

<table>
<thead>
<tr>
<th>A101</th>
<th>Frequency</th>
<th>Per cent</th>
<th>Valid Per cent</th>
<th>Cumulative Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>13</td>
<td>6.878</td>
<td>6.878</td>
<td>6.878</td>
</tr>
<tr>
<td>3</td>
<td>67</td>
<td>35.450</td>
<td>35.450</td>
<td>66.667</td>
</tr>
<tr>
<td>4</td>
<td>54</td>
<td>28.571</td>
<td>28.571</td>
<td>95.238</td>
</tr>
<tr>
<td>5</td>
<td>9</td>
<td>4.762</td>
<td>4.762</td>
<td>100.000</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>189</td>
<td>100.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Supplemental to the first question, the question “Do you have direct access to a knowledge management system or sub-components of such a system?” was asked. 32 per cent said no, while 14 per cent answered "I don’t know" (Table 6). Finally, the question was asked, “Do you have written policies or procedures for knowledge management practices?” This was responded to in the negative by around 50 per cent, while 9.5 per cent did not know. These results suggest that the hypothesis can be supported since the answers are within the expected spectrum.

Table 6: Frequencies for KM Systems

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Per cent</th>
<th>Valid Per cent</th>
<th>Cumulative Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>99</td>
<td>52.381</td>
<td>52.660</td>
</tr>
</tbody>
</table>
4.2. Test of Hypothesis 2

The statement of Hypothesis 2 was that the successful application of knowledge is slowed down by organizational and cultural barriers. MPs were asked whether, in their opinion, knowledge work was more of an individual or a team task. The scale ranges from 1 for “individual” to 5 for “team”. More than 50 per cent see knowledge work as a (rather) individual task. Another 27 per cent were undecided (Figure 2).

Furthermore, question no. 8 was asked in order to assess to what extent the parliament promotes a culture of sharing knowledge. A Likert scale from 1 (=not shared) to 5 (=always shared) was also used here. The result here is less clear but shows that around half of those surveyed consider the sharing of knowledge to be bad or in need of improvement (Figure 3). Considering the figures mentioned above, according to which 40 per cent do not have access to KM tools, the results presented here seem to support the hypothesis. Both cultural and organizational barriers exist and hinder the successful application of knowledge management.

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Per cent</th>
<th>Valid Per cent</th>
<th>Cumulative Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>61</td>
<td>32.275</td>
<td>32.447</td>
<td>85.106</td>
</tr>
<tr>
<td>d.k.</td>
<td>28</td>
<td>14.815</td>
<td>14.894</td>
<td>100.000</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>0.529</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>189</td>
<td>100.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 2: Frequencies team task

Figure 3: Frequencies sharing

4.3. Test of Hypothesis 3

Finally, Hypothesis 3 will be considered, which formulates a positive connection between the use of KM methods and the political output. For this purpose, the MPs were asked to
rate their political work (question 20). Again, a Likert scale from 1=below average to 5=above average was used (Table 7).

Table 7: Frequencies for political output

<table>
<thead>
<tr>
<th>A120</th>
<th>Frequency</th>
<th>Per cent</th>
<th>Valid Per cent</th>
<th>Cumulative Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>3.175</td>
<td>4.138</td>
<td>4.138</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>5.291</td>
<td>6.897</td>
<td>11.034</td>
</tr>
<tr>
<td>3</td>
<td>46</td>
<td>24.339</td>
<td>31.724</td>
<td>42.759</td>
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<td>4</td>
<td>54</td>
<td>28.571</td>
<td>37.241</td>
<td>80.000</td>
</tr>
<tr>
<td>5</td>
<td>29</td>
<td>15.344</td>
<td>20.000</td>
<td>100.000</td>
</tr>
<tr>
<td>Missing</td>
<td>44</td>
<td>23.280</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>189</td>
<td>100.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It should be noted that while the majority of MPs believed that the decisions were made on a good knowledge basis, even in retrospect, the independence from political and secular interests is obviously questioned by many. 62 per cent stated that political reasons influenced their decisions (Table 7).

As part of question 13, eight areas of KM application were asked about on a scale from 1 (not at all) to 5 (very intensively). Based on the average value, a new variable “KM use” was created. Figure 4 shows the linear connection between this new variable (independent) and the political output (dependent). It shows a positive correlation as expected, meaning, the more KM methods are used, the better the political output is. The correlation coefficient is 0.07. However, there is no significance (p=0.413).
The right slope of the linear regression indicates a positive influence. The requirements for a regression were checked and were all present. Although there are very few cases in which little or no KM is used, caution is advised when interpreting the linear regression. A trend is nevertheless discernible. R² is 0.05, which is a small explanation of the variance. The amount of variance explained is significant because the P-value of 0.008 is less than 0.05. Finally, the influence of KM use should be determined. To do this, the regression-coefficient value is calculated, which states how much the dependent variable changes when the independent variable increases by one unit, all other things being equal. At 0.191, there is a slightly positive influence (see Tables 8 and 9).

Although this tends to support the hypothesis, we only used one predictor here, so caution is advised. The problem of the lack of significance naturally remains, which is why I must reject the hypothesis.

Table 8: Regression Slopes and Intercept

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares of Mean Square F p</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₀</td>
<td>4.755</td>
</tr>
<tr>
<td>H₁</td>
<td>90.180</td>
</tr>
<tr>
<td>Total</td>
<td>94.935</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>RMSE</th>
<th>Autocorrelation</th>
<th>Statistic p</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₀</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.832</td>
<td>-0.085</td>
</tr>
<tr>
<td>H₁</td>
<td>0.224</td>
<td>0.050</td>
<td>0.043</td>
<td>0.814</td>
<td>-0.056</td>
</tr>
</tbody>
</table>

Table 9: Coefficients

<table>
<thead>
<tr>
<th>Unstandar. Standard Error</th>
<th>Standard. t p</th>
<th>Lower</th>
<th>Upper</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₀</td>
<td>3.978</td>
<td>0.071</td>
<td>56.1</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>H₁</td>
<td>3.358</td>
<td>0.242</td>
<td>13.8</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>KM</td>
<td>0.191</td>
<td>0.071</td>
<td>0.224</td>
<td>2.67</td>
</tr>
</tbody>
</table>
5. Discussion

It is important to acknowledge that there are valid criticisms of the research design employed in this study, which I cannot deny. One of the main points of criticism is certainly the relatively low response rate. Of course, 3 per cent is too low to be able to assume representative results. There is also the fact that the scatter is by no means evenly distributed. A disproportionate number of German-speaking MPs answered, while Southern and Eastern Europe are hardly represented. More options when selecting the languages would certainly have been desirable but were not possible due to limited resources. Despite all the differences, such as in the financial resources, I assume that the everyday problems and work processes of MPs in Europe are comparable. Nevertheless, it cannot be ruled out that this survey was answered in particular by those Members of Parliament who are fundamentally familiar with knowledge management or who understand its importance. The absence of MPs who have no connection to the topic would of course falsify the result. Isolated messages from Members of Parliament who asked for the definition of knowledge management or other specific terms underpin this fear. Regarding the low response rate in general, “[i]t is now understood that response rates have been declining, both in the United States and in most of the industrialized world, for at least several decades. These declining rates have led to concerns that nonresponse error may render survey estimates irretrievably biased” (Johnson & Owens, 2003, p. 127).

Although the questionnaire was planned with great care and adjusted repeatedly, it was only through practical application that various weaknesses were revealed. A few points are mentioned as examples. On the one hand, the beginning of the questionnaire should have been simpler in order to reduce the high dropout rate. The opening question was obviously too abstract since it got straight into the theory – without sufficient explanation. In general, terms or abbreviations such as KM were not sufficiently introduced. There were also a few technical errors. Some translations were incorrect or slipped into the wrong columns during transmission. These were always corrected based on information provided by the participants, but it cannot be ruled out that this resulted in incorrect assessments on the part of those questioned or even in the termination. At least I would like to note the fact that the MPs’ employees themselves were not part of the survey, although they played an important role in the answers. This was intended in the design of the study, so it is debatable whether this represents a weakness. However, future work should take this aspect into account.

This work aims to counteract the fear discussed at the beginning that knowledge management could be dead. This paper shows, on the one hand, the current cultural and organizational obstacles to good knowledge work in parliament and, on the other hand, offers a first draft for a political KM system. Parliaments are places of knowledge. However, despite numerous experts, well-trained staff and the technical infrastructure, the conclusion of this study when it comes to knowledge work was ambivalent. A key reason for this may be that “[i]n the public sector, information management systems are well developed while knowledge management systems are still in its infancy” (Romanelli, 2016, p. 655). Given the widespread agreement in the analysis that knowledge is still viewed as implicit and disorganized, there is an undeniable need for reforms. I therefore advocate the establishment of a knowledge management system (KMS) specifically developed for parliaments and designed for their specific needs. A good KM system would guarantee a transparent, high-quality and sustainable flow of information, especially in
the context of the aforementioned high staff turnover. The possible counter-argument of high costs can be invalidated by the fact that the European parliaments already have very good infrastructure. Although the desire for more staff was repeatedly expressed, which is certainly justified in individual cases, the potential of digitalization and increased international cooperation should make excessive personnel costs unnecessary. I am convinced that not only society, but every Member of Parliament would benefit from an improvement in their knowledge management. This applies first and foremost, but not exclusively, to members of the opposition, whose access to knowledge will, by nature of their position, always be limited. An IT-based system could assist and improve organizational processes for knowledge production, storage/retrieval, transfer, and application. KM systems are a sub-class of information systems (Alavi & Leidner, 2001). The first step would certainly be to formulate a holistic KM strategy that encompasses all areas of parliament and encompasses the peculiarities of the political space. It must define clear goals and structures, clarify responsibilities, and formulate the rights and obligations of both the government and Members of Parliament (Greiner et al., 2007). The ostensibly most important task will be to establish a greater awareness of knowledge as a resource. I believe that the role of the MP must be defined as that of a knowledge worker and, above all, supported as much more than it is at present (Davenport et al., 1998). Especially newly elected MPs will need more support in their dealings at the beginning of their term of office, for example through appropriate training.

Such projects are by no means new. In fact, the Global Centre for Information and Communication Technology (ICT) in Parliament is a partnership between the Inter-Parliamentary Union (IPU), the United Nations Department of Economic and Social Affairs (UNDESA) and several parliaments with the goal to develop new technologies in order to modernize parliamentary procedures and “strengthen the role of parliaments in the promotion of the information society by encouraging ICT-related legislation. [...] It contains recommendations on information sharing and networking, analysis and research, technical assistance and advisory services” (Romanelli, 2016, p. 656). These systems must be located directly at the level of parliamentary administration as a neutral institution and administered from there. Only then will MPs be able to build enough trust in this source of knowledge. Its main focus must be the use of internet directories and database searches to locate an expert or a documented source of knowledge, sharing expertise and cooperating in virtual teams, accessing data on the previous legislature, and learning about the newest scientific findings (Alavi & Leidner, 2001). Nevertheless, it is essential to create interfaces to the parliamentary groups or individual parliamentary offices so that a higher-level network is created. In addition, statements from affected stakeholders can be added and commented on by independent experts in order to create an overall picture that is as neutral as possible. Of course, the ability to work independently with these documents must remain. Solo national efforts must be avoided at all costs. Rather, there must be a European solution that ensures the greatest possible level of networking. AI tools can provide valuable services in translation and categorization (Tsui et al., 2000).

This will certainly mean restructuring and additional staffing in many parliaments, but a functioning democracy should be worth it to us. Like many commercial companies, departments responsible for knowledge work should be set up as standard. The installation of chief information/knowledge officers, some of which already exist in authorities (Estevez & Janowski, 2013), would also be a step in the right direction. In addition, as all the results show, the vast majority of parliaments already have good human resources. The MPs’ assistants are technically experienced all-rounders.
Combined with independent KM departments, an immense range of services would be available.

Specialist committees in parliaments also play a central role. These are – perhaps contrary to general opinion – mostly staffed by technical experts on the part of the MPs (at least at the management level). Each committee should be obliged to have a certain number of advisory, obligatory experts who accompany the legislative process from the beginning. Critics may object that this additional bureaucracy slows down the processes – an objection which certainly cannot be dismissed outright. However, I believe that the benefits of legislation based on scientific facts are far greater. My idea could even be continued to the extent that approved government proposals are always accompanied by an independent evaluation, which will also be publicly accessible. Parliament would be free to choose other options, but this would have to be justified on the one hand and discussed transparently on the other.

Critics may contend that these concepts are not novel and are rather broad, and they would indeed be correct. In particular, the measurability of knowledge work and its benefits on parliamentary work will probably not be possible. It may be frustrating that both business and science have adopted approaches and techniques that make all the proposed ideas feasible. The low response numbers must also be kept in mind during the analysis, so caution is required when interpreting and choosing further steps. Nevertheless, the existing tools and methods offer great potential for strengthening the role of MPs and making parliamentary processes more efficient overall. At the same time, this paper can only be seen as an initial impetus for debate, as various research questions still remain open. In further steps, the specific design of an IT system, the role of the parliamentary administration and personal employees would have to be examined more closely. International differences were left completely open, which would certainly be informative to explore.

6. Conclusion

This paper aimed to provide an overview of the extent to which Members of Parliament in Europe apply a systematic knowledge management approach to policy making and, building on that, to develop a first draft for a KM system especially designed for the needs of parliaments. The main theses that knowledge management is carried out inadequately or unsystematically, and that both organizational and cultural barriers stand in the way of successful implementation were confirmed. However, the presumed positive correlation between KM and political output could not be proven beyond doubt at the present time. To the best of my knowledge, this is the first attempt to do this.

MPs require knowledge to make policy decisions, understand current social contexts and envision future trends and challenges (Felfoldi & Donoso, 2012). The need for political KM is becoming obvious, when considering the oft lamented shortcomings of political regulation. Decision-makers who do not have the necessary specialist knowledge, and in some cases do not even have any related training, have to make decisions on highly complex issues every day. Even specialist committees are often not immune to political decisions based on ideology or public pressure. The role of MP is an almost unique profession, and those who take it on have little control over the subject areas in which they may get involved and must become expert in, in response to party, constituency, public, and media demands. Information need is, therefore, very often reactive and, as a result, information seeking may be rushed, unsystematic and uncritical.
(Orton et al. 2000). Given the small number of cases, caution should be exercised in over-interpreting them, but I am confident that the trend shown is transferable. I am convinced that KM could provide valuable support here and see this paper as a first step towards developing a future model.

References


