How the Perception of Psychological Safety Among Top-Level Civil Servants in the Netherlands Affects Their Commitment to Evidence-Informed Policy Making

Author: Thomas Augustinus

Supervisor: Dr. V.E. Pattyn

Second reader: Dr. A.V. Lerusse Ph.D.

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The Institute of Public Administration, Faculty of Governance and Global Affairs

Abstract

This study aims to contribute to the academic literature on leadership in public administration by exploring the mechanisms through which psychological safety, mediated by voice behaviour, can affect commitment to EIPM for top-level civil servants. This study was conducted using a cross-sectional survey (N=121) administered to top-level civil servants in the Dutch central government during May-June 2024. For the analysis, ordinal logistic regressions and mediation analysis following the Baron and Kenny (1986) method were used to test two hypotheses. For H1, the findings indicate that a higher level of perceived psychological safety among top-level civil servants positively affects their commitment to EIPM. Furthermore, H2 is partially accepted, as the relationship established in H1 is partially mediated by voice behaviour. Regarding the current state of affairs of the individual concepts, this sample shows relatively high levels of agreement on psychological safety, voice behaviour, and commitment to EIPM. Additionally, the study addresses its limitations and suggests potential avenues for future research. The policy recommendations are that leadership should be viewed not only as antecedents for creating psychological safety but also as central figures themselves, as this can have beneficial effects for the organization. Moreover, the item from psychological safety assessing the individual's perceived freedom to take risks within the organisation should be subjected to further research.

Key words: Psychological safety, evidence informed policy making, voice, leadership, mediation analysis, organisational learning, top-level civil servants.

Acknowledgements

Essential background information

First, some essential background information is disclosed in the interest of transparency.

During my internship at the Ministry of the Interior and Kingdom Relations, I worked within the team responsible for social safety for the Dutch central body of government.[1] I had various tasks that were not directly related to conducting this study; however, I was given the freedom to allocate time for this study. This meant that I had the opportunity to attend a variety of meetings to gather information and build a network related to social safety.

Through this network, I came into contact with a person responsible for the social safety curriculum within the Dutch Senior Civil Service[2] (SCS), providing the link I sought between social safety on one hand and leadership on the other. After all, top-level civil servants within the central government of the Netherlands fall under the responsibility of the SCS. Additionally, in the months leading up to choosing a thesis capstone, I spoke with several professionals and academics in the fields of social safety and leadership. During these discussions, I explored different potential topics and associated methodologies, weighing their possible advantages and disadvantages.

It is also important to emphasize that I was not directed to take any particular approach. The conversations I conducted, initiated by myself, started with broadly gathering information about potential directions from various perspectives. I weighed and made all decisions independently. Moreover, I was not influenced in any way to present certain findings in the research. The only feedback I received on the study was, as is customary when writing a master's thesis, from my thesis supervisor.

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[1] NL: Rijksoverheid
[2] NL: Algemene Bestuursdienst (ABD)

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1. Introduction

This thesis demonstrates how the individual perception of psychological safety among top-level civil servants affects their commitment to Evidence-Informed Policy Making (EIPM). Where commitment to EIPM is characterised by both the prioritisation of EIPM and the fostering of organisational policy learning (OPL). Building further upon OPL, the focus of this study is not merely on being *right*, but on how leadership responds when confronted with evidence showing a mismatch between the intentions and outcomes of policy—in other words, when the policy in the organisation is going '*wrong*', and how this situation offers an opportunity for learning.

Top-level civil servants, the leaders within the central government bureaucracy, play a crucial role in how the organisation functions. Therefore, it is important to understand how they themselves act. This is important because, in general, leadership behaviour has a proven effect on organizational outcomes (Jacobsen & Andersen, 2015; Rainey & Steinbauer, 1999; Shamir & Howell, 1999; Yukl, 2012). Specifically, top-level civil servants are a key factor in harbouring the level of psychological safety and the commitment to EIPM throughout the organization (Edmondson & Lei, 2014; Groeneveld & Janssen, 2023; Liu, Hu, Li, Wang, & Lin, 2014; Newman, Donohue & Eva, 2017; Shitrit, Heij & Waterreus, 2023; Torenvlied, de Boer, Couwenberg, Linnenbank & van der Meulen, 2022). All of the above gives us the following explanatory research question:

How does the perception of psychological safety among top-level civil servants affect their level of commitment to evidence-informed policy making?

1.1 Academic relevance

There is a clear need for further research with a focus on the role of leadership for both EIPM as well as psychological safety, especially on the connection between these three topics (Donohue & Eva, 2017; Edmondson & Lei, 2014; Head, 2016; Newman, Cherney & Head, 2016; Bernards, Schmidt & Groeneveld, 2023). As stated before, the current literature highlights the role that leadership within organizations plays in both commitment to EIPM and fostering psychological safety (Edmondson & Lei, 2014; Groeneveld & Janssen, 2023; Liu, Hu, Li, Wang, & Lin, 2014; Newman, Donohue & Eva, 2017; Shitrit et al., 2023; Torenvlied et al., 2022). However, despite their use as indicators to assess the functioning of bureaucracy

in the real world, both EIPM and psychological safety both originate from the medical academia and have not yet been fully integrated into the literature on leadership within the realm of public administration (Donohue & Eva, 2017; Edmondson & Lei, 2014; Head, 2016; Newman et al., 2016; Bernards, Schmidt & Groeneveld, 2023; Groeneveld & Janssen, 2023; 2022; Shitrit et al., 2023; Torenvlied et al., 2022)

Thus the aim of this study is to add to the academic literature by exploring the mechanisms between both themes in regard to the role that top-level civil servants have within their organisations.

EIPM

There is a gap in the literature in understanding the utilization of evidence within bureaucracies for policy development (Head, 2016; Newman et al., 2016; Newman, 2017; Parkhurst, 2017; Sanderson, 2002). This gap in research leaves unanswered questions about how top-level civil servants prioritize evidence in the policy-making process and their opportunities to learn from policy (Head, 2016; Sanderson, 2002).

This while EIPM could contribute to improving policy effectiveness and increase the chances of policy success, enhance the perceived legitimacy of the policy-making process and foster increased trust in decision-makers among civilians, (Head, 2016; Newman et al., 2017 OECD, 2022; Sanderson, 2002).

Thus this study adds to the current academic literature by exploring how evidence is utilised by top-level civil servants in order to give insights into how top-level civil servants prioritize evidence and how they learn from it.

Psychological safety

Most research on the construct of psychological safety has been conducted within Anglophone countries, mainly in the public and private sector (Newman et al., 2017; Edmondson & Lei, 2014). Where in the public sector, this research primarily pertains to hospitals and schools (Newman et al., 2017; Edmondson & Lei, 2014). And although these previously mentioned settings may share similarities, such as bureaucratic environments characterized by complexity and regulations, significant differences exist, particularly concerning the role of top-level civil servants (Newman et al., 2017; Edmondson & Lei, 2014). Moreover, the emphasis often lies on leadership as an antecedent in creating psychological safety, but not often on how leadership experiences psychological safety themselves and the

effects that this could have throughout the organisation (Edmondson & Lei, 2014; Frazier, Fainshmidt, Klinger, Pezeshkan & Vracheva, 2017; Hedlund & Osterberg, 2012; Liu, Hu, Li, Wang, & Lin, 2014; Newman et al., 2017).

This while an increased level of psychological safety can contribute to an environment where individuals feel secure to express themselves and take risks (Edmonson, 1999; Edmondson & Lei, 2014; Newman et al., 2017). This, in turn, could foster continuous improvement by encouraging the sharing of opinions, eventually leading to positive organizational outcomes such as learning behaviour (Edmonson, 1999; Edmondson & Lei, 2014; Newman et al., 2017).

Voice behaviour has been shown to be a potential mediator in this relationship, where psychological safety creates space for voice behaviour, subsequently leading to the various associated positive organisational outcomes (Potipiroon & Wongpreedee, 2021; Schuster, Mikkelsen, Correa, & Meyer-Sahling, 2022; Tsameti, Bellou & Tsamantouridis, 2023).

Thus this study adds to the current academic literature by exploring the perceptions of psychological safety among top-level civil servants and its consequential outcomes.

1.2 Societal relevance

Both EIPM and psychological safety are high on the agenda of the Dutch central government (Groeneveld & Janssen, 2023; ICTU, 2022; OECD, 2020; Shitrit et al., 2023; Torenvlied et al., 2022). Both separately as well as combined, these topics have the potential to bring a multitude of positive effects both within and outside the organization, especially through the leadership role of top-level civil servants (Groeneveld & Janssen, 2023; ICTU, 2022; OECD, 2020; Shitrit et al., 2023; Torenvlied et al., 2022).

Where within the organization, it could increase psychological safety and the positive outcomes associated with it, outside the organization, EIPM has been shown to strengthen trust in bureaucracy (OECD, 2020; Shitrit et al., 2023; Torenvlied et al., 2022). Especially, at a time when trust in government is low, citizens value the neutral and reliable character of bureaucracy, where the commitment to EIPM can contribute to the perceived legitimacy of policy (Frey, Nguyen & Hermanutz, 2022; Head, 2016).

Finally, when these topics are combined, this research could demonstrate how psychological safety, and consequently, EIPM, could improve the organization both internally and externally through the role of top-level civil servants.

EIPM

"*Building capacity for evidence-informed policymaking in governance and public administration in a post-pandemic Europe*" is a top priority on the agenda for the OECD, EU, and subsequently for the Dutch central government, as they collaborate to pursue this goal (European Commission, n.d.; Manta & Melchor, 2022; OECD, 2020; Wetenschappelijke Raad voor het Regeringsbeleid, 2023). These efforts aim to increase EIPM in order to build the capacity to tackle increasingly complex societal challenges (European Commission, n.d.; Manta & Melchor, 2022; OECD, 2020; Wetenschappelijke Raad voor het Regeringsbeleid, 2023).

OECD recommends to reduce the knowledge gap and foster evidence of EIPM across the public sector, this entails gaining a deeper understanding of the complex realities of policymaking, particularly within highly politicized contexts (Manta & Melchor, 2022; OECD, 2020). Because without the right conditions the initiatives are unlikely to succeed, where there is a crucial role for leadership to drive organizational change (Manta & Melchor, 2022; OECD, 2020). Additionally, initiatives should explore how evidence is utilized to ultimately facilitate continuous learning and improvement (Manta & Melchor, 2022; OECD, 2020).

In the Netherlands, there are currently initiatives such as "*Beleidskompas*," "*Beleidskeuzes uitgelegd*," and "*Strategische evaluatieagenda*," aiming to better integrate evidence into the policy making process (Shitrit et al., 2023). However, various reports, both aimed the Dutch central government as well as for specific ministries, indicate that the emphasis tends to lean more towards accountability rather than learning, and furthermore, there appears to be an underutilization of evidence, while evidence could serve as an "*indispensable compass for well-founded and effective policy*" (Shitrit et al., 2023; Torenvlied et al., 2022, p.1)[3].

Thus this thesis aims to enhance Dutch government policy by providing insights into the current status of, and exploring the mechanisms through which commitment to EIPM by top-level civil servants operates. It takes into account the recommendations outlined by the OECD (2020) and addresses the most important dimension mentioned in Shitrit et al., (2023) and places them within a broader academic framework.

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[3] Translated from Dutch: "*kennis als een onmisbaar kompas voor een goed onderbouwd en effectief beleid*"

Psychological safety

Within the Dutch central government, there are several programs with the aim of improving social safety[4], with a particular focus on the role of top-level civil servants in creating psychological safety.[5] And as previously mentioned, where other studies often consider leadership as an antecedent for psychological safety, this research focuses specifically on leadership itself (Edmondson & Lei, 2014; Frazier et al., 2017; Hedlund & Osterberg, 2012; Liu, Hu, Li, Wang, & Lin, 2014; Newman et al., 2017).

What particularly emerges from recent government-wide surveys into the state of psychological safety is that the feeling of freedom to take risks was the lowest-rated indicator of psychological safety (Groeneveld & Janssen, 2023; ICTU, 2022). This finding, especially in the context of EIPM, where evidence is not always equally valued, is significant (Shitrit et al., 2023; Torenvliet et al, 2022). Since it has been shown that daily concerns often dominate, and not every Director-General or minister is receptive to evidence (Shitrit et al., 2023; Torenvliet et al, 2022). This underscores the unique context of the research population, highlighting the politicized environment in which top-level civil servants operate (Shitrit et al., 2023; Torenvliet et al, 2022; van Dorp & 't Hart, 2019; van Dorp, 2023)

Particularly when examining psychological safety in combination with voice behaviour and its subsequent effect on commitment to EIPM, this research stands out from others, as within the context of psychological safety, where the feeling of freedom to take risks is a central theme, individuals weigh their options before voicing their opinions, especially when voicing opinions may involve taking a risk that others may not always appreciate (Edmondson & Lei, 2014; Newman et al., 2017).

Overall this research aims to contribute by providing insights into the current status of the perception psychological safety of top-level civil servants in the Netherlands. Furthermore it can contribute by providing further insights into the mechanisms that are at play here.

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[4] See chapter 2.2.2 on the difference between social and psychological safety.
[5] See for example: The program Dialoog & Ethiek (not specifically for leadership); The series 'Leidinggeven aan integriteit' and the masterclass 'The power of psychological safety' available on the SCS learning portal; Furthermore social safety is also mentioned in the Kompas voor publiek leiderschap - visie op wenselijke leiderschapsrichtingen.

1.3 Methods and analysis

The method of data collection is a cross-sectional survey that was distributed via email among top-level civil servants within the SCS during May-June of 2024. The quantitative analysis was conducted using Stata, testing two hypotheses. The first hypothesis was tested using non-parametric tests supplemented by ordinal logistic regressions. The second hypothesis was tested using a mediation analysis following the Baron and Kenny (1986) method.

1.4 Reading guide

The subsequent chapter presents the literature review that builds towards a conceptual framework that will be presented in chapter 2.3. This is followed by chapter 3, the methods, which pays specific attention to the method of data collection, the operationalization of the variables, and a reflection on the validity, reliability, and contextual factors of this research. In chapter 4, the statistical analysis will be conducted in two subchapters: descriptive statistics and hypothesis testing. This is followed by the conclusion, discussion, and finally, the policy recommendations, in chapter 5-8 respectively. The references and the appendix, which includes the survey and descriptive statistics, are provided afterwards.

2. Literature review

In this chapter, we begin with a comprehensive review of the literature, gradually narrowing the focus from a broad overview to a clear and concise framework befitting of the scope of this research. Initially, we focus on EIPM, followed by psychological safety, where in the second subchapter the emphasis will also be placed on the link between the independent and the dependent variable, as well as the mediator. This leads to the development of a conceptual framework and ultimately, the hypotheses. But first, a justification of the literature review.

Justification of the literature review

First, a thorough literature review was conducted whereby the existing research was examined to lay the groundwork for this study. This involves reviewing academic articles, books, as well as government reports to understand key concepts and identify gaps in the current literature. From there on, a conceptual framework was developed, which serves as a theoretical structure guiding the research design and analysis. This framework outlines the relationships between different variables as identified in the literature.

Initially, the literature review on psychological safety was based on the meta-analysis of Newman et al. (2017). Subsequently, an extensive literature research was conducted to identify studies published after 2015[6], with a specific focus on the role of psychological safety within public administration. Additionally, renowned journals in public administration[7] were searched for the keywords: "psychological safety," "evidence-informed policy making", "EIPM", "Evidence-Based Policy-Making" "EBPM", "organisational learning", "single loop learning", "double loop learning.", "SLL" and "DLL", both separated as well as in combination with each other. In addition to this, Google Scholar was searched with the same key terms and the most cited literature was examined. All papers underwent the snowball method during the selection process in order to assure that the literature review was as comprehensive as possible.

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[6] Because the study by Newman et al (2017) already focused on the studies published on psychological safety between 1990 and 2015. Furthermore, the definition of psychological safety as used in this study originates from the 1990s so the studies before that time were not extensively searched for.
[7] Public Administration Review and The Journal of Public Administration

Furthermore, to enhance the connection to the 'real world' the academic theoretical discourse was supplemented with additional research from government bodies from the Netherlands. However, to maintain academic integrity, the conceptualization and operationalization remain traceable to their respective academic foundations.

2.1 Evidence informed policy making

In 2.1.1. the emergence of the concept of EIPM is broadly explained. This lays the groundwork of section 2.1.2 Commitment to EIPM and the role of leadership, where again we start with a broad elaboration, this time with a focus on the dependent variable. Both subchapters will end with a summary that will narrow the chapters down and synthesise the previously discussed literature.

2.1.1 The emergence of evidence-informed policy making

In the section on paradigm shifts, the simultaneous emergence of EIPM alongside a shift in the view of public administration is explained. In the subsequent section, we examine changes in perspectives over time between the relationship of evidence and policy.

Paradigm shifts

Scholars generally agree that what is now known as EIPM originated in the medical sector in the early 1970s, with renewed interest and targeted application to public management in the 1990s (Head, 2016; Sanderson, 2002). During this time, the UK Labour government introduced it as a public management reform under the motto "*what matters is what works*" (Head, 2016; Newman et al., 2016; Newman, 2017; Parkhurst, 2017; Sanderson, 2002, p. 4). The intention behind EIPM was to enhance the efficiency and effectiveness of policy by utilizing evidence, thus promoting social progress through academic reasoning and policy learning (Head, 2016; Sanderson, 2002). Additionally, EIPM was believed to increase the perceived legitimacy of the policy-making process and enhance trust in decision makers among civilians (Head, 2016).

During the same period (1990s) in the UK, there was a paradigm shift in the perception of public administration, transitioning from the traditional view to that of new public management, with the primary objective of achieving efficient and effective governance (Ansell & Gash, 2008; Bryson, Crosby & Stone, 2015; Pfiffner, 2004; Hood, 1991). This

approach was adopted across Western democracies, and it was one of the factors that lead to changes in (relationship with) the environment, such as the blurring of sectors, and the emergence of more complex challenges faced by governments (Ansell & Gash, 2008; Bozeman & Bretschneider, 1994; Bryson et al., 2015; Pfiffner, 2004; Hood, 1991). Consequently, over the years the followed there arose a new, more complex understanding on the relationship between the civil service and the various stakeholders that they have to deal with (Ansell & Gash, 2008; Boyne & Meier, 2009; Bryson, Crosby & Stone, 2015; Bozeman & Bretschneider, 1994; Pfiffner, 2004; Hood, 1991).

The relationship between evidence and policy

Over time, there has been a historical shift in the comprehension of what constitutes evidence and, consequently, the relationship between evidence and policymakers (Caplan, 1979; Weiss, 1979; Head, 2016; Newman et al., 2016). Eventually the evolution of EIPM has led to a broader and more nuanced understanding of the complex environment within which policymakers in a bureaucracy operate in, with multiple sources of information influencing the decision-making processes (Caplan, 1979; Weiss, 1979; Head, 2016; Newmanet al., 2015).

Two seminal articles give insights into the various perspectives on the relationship between those who produce evidence (researchers) and those who use it (policy makers). Early in the debate, both articles presented different views on this relationship, both assuming a relatively narrow understanding between academics (from within the social sciences) and policy makers (Caplan, 1979; Head, 2016; Weiss, 1979; Newman et al., 2016). One perspective called for an expansion of the concept of research utilization, proposing several models to explain how policy was both directly and indirectly influenced by research in the policy-making process (Weiss, 1979). There is also the two communities theory, which argued that the relationship between social scientists and policymakers was strained, with these two groups functioning in separate spheres due to various factors such as conflicting values, different reward systems, and divergent languages (Caplan, 1979)

Contemporary research into the two communities of research utilization however suggest a relatively broader understanding research and policy makers, that acknowledge various sources of information, and a wider range of interactions between those who produce and those who use evidence, with more attention for individual differences in this relationship that effect the commitment of evidence into the policy making process (Newman et al., 2016). A relationship where policymakers require different types of evidence and need to be able to

get an understanding of it, while there must also be demand for the evidence from their end; in contrast, researchers are partially reliant on the demands and investments of policymakers (Head, 2016). However, it still acknowledges that the problems in the public policy are hard to define and capture within the world of research, there are uncertain casual links and loosely defined policy because of wicked problems (Head, 2016).

In summary

Over the decades that followed, the phenomenon of EIPM has undergone various names and conceptual understandings, which, after years of scientific scrutiny, have led to the term we attribute to it today (Head, 2016; Newman, 2017). While previous conceptions implied that policy decisions were solely evidence-based (Research Utilisation, Evidence-Based Policy Making (EPBM), or variations thereof), the current emphasis is on the term *informed* (Head, 2016; Newman, 2017). This shift reflects the recognition that within the increasingly complex bureaucratic context in which civil servants operate, scientific evidence is just one of the factors influencing policymaking (Ansell & Gash, 2008; Boyne & Meier, 2009; Bryson et al., 2015; Head, 2016; Newman et al., 2016; Newman, 2017). Thus, from hereon, the term EIPM is adapted in this study, in correspondence with the current state of the academic literature.

2.1.2 Commitment to EIPM and the role of leadership

Capturing commitment to EIPM comprises two components. Firstly, there is the prioritisation of EIPM, where it is explored how (top-level) civil servants engage in varying degrees of EIPM. The following section focuses on how leadership deals with EIPM, with the aim of learning from it. Finally, the context is tailored to the Netherlands, highlighting the role of top-level civil servants within their respective context.

Prioritisation of EIPM

First the relationship between evidence and policymakers within bureaucracy is examined.

A recent meta-study on information use within public administration by Cantarelli, Belle, and Hall (2023) sheds light on this matter. The authors suggest that the type of user plays a pivotal role in evaluating both objective and subjective information (Cantarelli et al., 2023). Objective information use encompasses various architectural features, such as content, format, and purpose (e.g. for evaluation, provided by public or private sources) (Cantarelli et al., 2023). And whereby subjective information use involves mechanisms that may trigger systemic

cognitive biases or contribute to the variability of noise (Cantarelli et al., 2023). The relationship between objective and subjective aspects is moderated by the type of user who is in charge of decision making (Cantarelli et al., 2023). Additionally, recent research has delved into the perceptions of policy actors regarding what constitutes as evidence for policymakers. These perceptions are heavily influenced by context, the nature of the questions being addressed, and the available evidence (MacKillop & Downe, 2022). The authors also differentiate between various typologies of actors perceptions, noting agreement across profiles on several points: the importance of clearly defining evidence when communicating with policy makers, that all evidence is equal in a political context, and the rejection of the idea that evidence is merely a performance or add-on (MacKillop & Downe, 2022). Additionally, the authors find a correlation between time spent in academic training and a stronger belief in EPBM, however, they observe that individuals who spend more time working in the field tend to have a broader view of evidence (MacKillop & Downe, 2022). Other studies also highlight variations in information needs and uptake among senior managers across different policy domains and organizational types with distinct functions (Head, 2015).

Organizational policy learning

When new evidence is introduced (into existing policy initiatives) it may influence the policy-making process by challenging policymakers with information that indicates a mismatch between the intentions and outcome of policy, and or a conflict with the status quo, including the norms and values of the policy makers, as well as those from the organization (Van Der Knaap, Pattyn & Hanemaayer, 2020,; Head, 2016; Sanderson, 2002).

The commitment to evidence throughout the policy-making process offers the opportunity to enhance organizational learning[8] through both single loop learning (SLL) and double loop learning (DLL) (Van Der Knaap et al., 2020; Auqui-Caceres & Furlan, 2023; Edmondson & Tucker, 2003; Sanderson, 2002). Where SLL involves individuals attempting to correct a mismatch between intentions and outcomes by adjusting their actions, resulting in policy improvement while maintaining the status quo (Auqui-Caceres & Furlan, 2023; Van Der Knaap et al., 2020). Conversely, DLL occurs when policymakers address the underlying

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[8] The term organizational policy learning (OPL) is adapted in this study as this better reflects the scope of this research.

assumptions, goals, norms, and values of the policy, potentially leading to fundamental changes in the policy itself, and ultimately, if this is adapted across the organisations, become a learning organisation (Argyris, 1977; Auqui-Caceres & Furlan, 2023; Van Der Knaap et al., 2020).

Building upon this, DLL can be explained by looking at the *the theory of action*, an individual's governing abilities that explain their reasoning of acting (Argyris, 1977; Auqui-Caceres & Furlan, 2023). This theory of action examines the relationship between thinking (what is called the *espoused theory*, the actions individuals design to take) and doing (what is called the *theory in use*, the actions individuals actually take) (Argyris, 1977; Auqui-Caceres & Furlan, 2023). Where the theory in use is guided by two models—Model-I, which aims to avoid threats or embarrassment, and Model-II, which advocates for the use of valid information (Argyris, 1977; Auqui-Caceres & Furlan, 2023).

A recent meta-study by Auqui-Caceres & Furlan (2023) aimed at revitalizing the concept of DLL and addressing misconceptions to remove barriers for future application by providing recommendations on how to conceptualize, measure, and generate it, primarily from a management perspective. These recommendations shall be addressed and will be fully integrated into the conceptual framework in chapter 2.3 and further throughout this study.

Research on EIPM from the Netherlands

In this part we look at the use of evidence within the Dutch government in relationship with top-level civil servants. Two reports are central here, first a report that explores the extent to which the Ministry of Justice and Security (JenV) engages in EIPM, followed by a recent government-wide exploratory report that looks at the Dutch central government in its entirety and asses the current state of the policy and knowledge domains.[9] Finally, this subsection will be enhanced with academic literature on top-level civil servants in the Netherlands that confirm these findings about the unique context.

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[9] These policy and knowledge domains are: the planning agencies (i.e. CPB, PBL, SCP) and national knowledge institutions (i.e. CBS, KIM, KNMI, RWS) that hold a special position as gateways to the Council of Ministers. Additionally, there is a system of independent advisory councils (i.e. WRR, RvS, SER, AIV, AWTI, Education Council, Climate Council), international knowledge organizations (i.e. OECD, Eurostat), research from academic institutions (i.e. universities and colleges), policy research firms or consulting firms, inspection and implementation agencies for practical knowledge, field visits and consultations, as well as sector and professional organizations. See page 19-21 of the report of Shitrit et al. (2023).

First of all the rapport at JenV reaffirms our interpretation of EIPM as the appropriate one within the context of this study and also advocates for a broader view of EIPM, as opposed to EBPM (Torenvlied et al., 2022). The findings for JenV indicate that employees prefer practice-based[10] evidence over academically based research, as the latter may not align with their interests or may be perceived as less relevant due to time constraints (Torenvlied et al., 2022). The authors state about the context that the leadership operates in that they experience politicization, which results in time pressure and influences policy, particularly during the stages of agenda setting, policy preparation, and evaluation (Torenvlied et al., 2022).

The recent Dutch government-wide exploratory report identifies a clear problem: the policy and knowledge domains are highly fragmented, in an environment where there is a need for substantive guidance, but the government lacks the substantive capacities, furthermore evidence seems to be increasingly politicized (Shitrit et al., 2023). This report also assumes a very widespread evidence infrastructure and a broad perception of what constitutes evidence for Dutch civil servants, within the context they operate in (Shitrit et al., 2023).

Moreover, this report emphasizes the unique context in which top-level civil servants operate and places a burden on the shoulders of leaders within the organization regarding the commitment of EIPM (Shitrit et al., 2023). This particularly necessitates a cultural shift that must be driven from the top (Shitrit et al., 2023). Within a broader context, the authors mention three dimensions (structure, culture, and process) that can serve as both barriers and facilitators in the commitment of EIPM (Shitrit et al., 2023). The relationship between these dimensions is such that while structure and process are necessary, they are not sufficient without a culture where evidence is utilized (Shitrit et al., 2023). Within the scope of this research, culture will be further elaborated upon as it pertains to the role of the top-level civil servant themselves have. The dimension culture refers to how people within the government deal with evidence, the barriers include limited attention to evidence and long-term strategy, partly due to increasing external dynamics (e.g., media, social media) and the politicization of bureaucratic roles (Shitrit et al., 2023). This is further exacerbated by the mobility of civil servants at the expense of institutional memory (Shitrit et al., 2023). The prevailing focus on short-term issues, even at senior bureaucratic levels, and the politicization of debates lead to evidence being used

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[10] Practical experience, policy documents, case law, instructions from supervisors.

as a rhetorical tool rather than a basis for reflection and EIPM (Shitrit et al., 2023). On the other hand, a special role is reserved for senior officials, as their commitment to EIPM influences how their staff perceive and adopt EIPM, which can vary significantly between departments (Shitrit et al., 2023). Moreover, prioritizing knowledge and bureaucratic expertise over political sensitivity could help ensure that knowledge is effectively utilized given the current capacity constraints (Shitrit et al., 2023).

Additional academic literature on the role of Dutch top-level civil servants again highlight the relationship between politics and administration, that teaches us that top-level civil servants have a dynamic relationship with politics, that is specific to their role and a part of the decision making process (van Dorp & 't Hart, 2019; van Dorp, 2023).

In summary

Factors that influence EIPM can be divided between the individual and the context, and the interplay between them (Cantarelli et al, 2023; Head, 2015; MacKillop & Downe, 2022). In this case, the role of leadership in shaping the organizational culture emerges as the most impactful, necessary, and sufficient condition influencing the commitment to EIPM within the organization (Shitrit et al., 2023; Torenvlied et al., 2022).

Thus, since this research emphasizes the role of leadership within the organization and focuses on the perception of the individual top-level civil servant, here, the individual is viewed as the decision-maker, and their perception and the extent to which they value evidence play a crucial role, this entirety takes shape in the prioritisation of EIPM.

Furthermore, the question arises regarding how top-level civil servants respond when confronted with (new) evidence showing a mismatch between the intentions and outcome of policy with the aim of learning from this experience, within the scope of this study this is referred to as OPL. This concept explores the utilization of evidence in both SLL and DLL, whereby the latter representing the ultimate goal of becoming a learning organisation (Argyris, 1977; Auqui-Caceres & Furlan, 2023). Here, norms, values, and behaviour are significant, as the approach not only focuses on 'quick fixes' (SLL) but also entails reflection and addressing underlying issues (DLL) (Argyris, 1977; Van Der Knaap et al., 2020; Auqui-Caceres & Furlan, 2023; Edmondson & Tucker, 2003).

Finally, research on EIPM from the Netherlands again confirms that the EIPM approach is the most suitable, as opposed to EBPM (Shitrit et al., 2023; Torenvlied et al., 2022). Moreover, the main takeaway from this subchapter, in anticipation of the discussion on psychological

safety and voice to be covered in the next chapter, is that evidence also becomes politicised, particularly within the context in which top-level civil servants operate in (Shitrit et al., 2023; Torenvlied et al., 2022; van Dorp & 't Hart, 2019; van Dorp, 2023). This raises the question of whether psychological safety will hold true in this context as well. Moreover, in regard to voice behaviour, especially in the light of OPL, since it is sometimes crucial to speak out against issues that may directly challenge the current status quo.

2.2 Psychological safety

This subchapter starts by exploring the origins of psychological safety and its emergence in academic literature. Followed by a short explanation of why this term is chosen as opposed to social safety. Then, the focus shifts on the current research status, with special attention on the relationship between commitment to EIPM and psychological safety in regard of leadership. And finally the role of voice behaviour as a mediating variable.

2.2.1 On the origins of psychological safety

The seminal work on the construct of psychological safety is considered to be that of Schein and Bennis in 1965, who laid the foundation for what would later be known as psychological safety, within the framework of change management (Edmondson & Lei, 2014; Newman et al., 2017). Schein and Bennis describe to what extent an individual feels secure enough in their ability to manage change (Edmondson & Lei, 2014; Newman et al., 2017). Several decades later, renewed attention is drawn to the subject when Kahn conceptualizes the concept of psychological safety as "*an individual's perceptions as to whether he or she is comfortable to show and employ his(her)self*" (Edmondson & Lei, 2014; Newman et al., 2017, p. 523).

The construct of psychological safety, as known in contemporary research, just as with EIPM, also finds its origin in the medical world. Most renowned in the work of Amy Edmondson, she defines it as "*a shared belief held by members of a team that the team is safe for interpersonal risk-taking—and models the effects of team psychological safety and team efficacy together on learning and performance in organizational work teams*" (Edmonson, 1999, p. 350). From this quote, it becomes evident that whereas Kahn described it as an individual perception, Edmondson opts for a team-level approach (Edmondson & Lei, 2014; Newman et al., 2017). Moreover, when we speak about a certain level of psychological safety,

we refer to a psychologically safe work environment/climate (Edmondson & Lei, 2014; Newman et al., 2017).

The difference between social safety and psychological safety

There is a distinction between the academic literature, where the construct of psychological safety is used, and in society, where people often refer to the same construct but use the term social safety[11]. Social safety is defined by the Dutch government as *"An open and safe conversational culture in which civil servants feel comfortable expressing themselves without fear of repercussions. An environment where civil servants are not burdened by unwanted behaviours such as bullying, discrimination, unwanted sexual attention, and harassment."*[12] (Ministerie van Volksgezondheid, Welzijn en Sport, 2024, p. 1)

They share a common denominator, which is a culture where there is room to speak up, to voice without the fear of repercussions. Social safety however adds the notion that civil servants are not burdened by unwanted behaviours as described in the quote above.

Therefore, in this research, the definition of psychological safety is chosen because it is based on a validated and well-researched construct. This also aligns with the research currently being conducted within the Dutch government, where they initially employ the construct of psychological safety to gauge the level of social safety, and they assess unwanted behaviour separately at a later stage.[13] By opting to measure the construct of psychological safety, we facilitate comparisons with both the existing academic literature on psychological safety as well as research findings in the Netherlands.

2.2.2 Current research status on psychological safety

The main idea behind psychological safety is that people feel secure enough to speak up and take risks (Edmonson, 1999; Edmondson & Lei, 2014; Newman et al., 2017). In this way, individuals can contribute to the continuous improvement of the organization by voicing their opinions when necessary, facilitating organizational learning (Edmonson, 1999;

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[11] NL: *Sociale veiligheid*

[12] Literal translation as found in the *Beslisnota bij antwoorden op Kamervragen over een sociaal veilige werkomgeving voor Rijksambtenaren* by the Ministerie van Volksgezondheid, Welzijn en Sport (2024).

[13] See Groeneveld & Janssen (2023) and ICTU (2022) both research was conducted on behalf of and within the Dutch government.

Edmondson & Lei, 2014; Newman et al., 2017). The specific behaviours that determinate psychological safety are measured through a Likert scale, that gives insight in both the individual behaviours and combined the level of psychological safety. This scale asks participants to what extent they feel free to bring up difficult issues; to ask others for help; to feel free to make mistakes; to feel that everyone's talents are valued; to feel accepted for who they are; to feel safe to take risks, and finally, that they are not intentionally hindered by others (Groeneveld & Janssen, 2023; Newman et al., 2017).

Contemporary research has demonstrated that a psychologically safety can influence organizational outcomes on multiple levels (i.e. individual, team/group and organisational). Relevant for this study are findings that, on a team level, process innovation mediated by psychological safety, and psychological safety as an antecedent, can increase knowledge exchange, ultimately leading to improved organizational performance (Edmondson & Lei, 2014; Newman et al., 2017). On a group level, psychological safety can enhance information sharing, thereby improving organizational learning and, consequently, decision-making quality (Edmondson & Lei, 2014; Newman et al., 2017). Furthermore, in the case of task conflict, psychological safety may play a mediating role and ultimately stimulate innovation and process change (Edmondson & Lei, 2014; Newman et al., 2017).

On the relationship between commitment to EIPM and psychological safety in light of leadership

A study on the Swedish army by Hedlund & Osterberg (2012) demonstrated that (team-level) psychological safety in relation to learning behaviours indicated that psychological safety is a significant indicator for discussion and reflection, leading to changes in the theory in use, which could positively affect OPL. Conversely, a poor level of psychological safety can lead to defensive routines that hinder learning behaviour (Hedlund & Osterberg, 2012). However, this study takes places within a different context (military staff in Sweden) and did not focus on the perception of psychological safety of the leadership themselves, but team leader coaching as a antecedent for psychological safety (Hedlund & Osterberg, 2012).

Furthermore, early findings from Argyris (1977) corresponds with the construct of psychological safety. The author states that Model II "*emphasizes the building of trust and risk taking, plus stating of positions in such a way that they are publicly testable so that selfsealing processes can be reduced.*" (Argyris, 1977, p. 123) which resembles the construct of psychological safety by emphasising team dynamics, particularly feeling the freedom to take

risks and the existence of mutual trust that exists in a group (Argyris, 1977; Edmonson, 1999). But as becomes clear from the quote, it differs in a way that it adds the notion that the arguments should be formulated in a way that they can be publicly testable (Argyris, 1977).

Finally, as stated in the introduction, (perceived) leadership behaviour has a proven effect on organizational outcomes (Jacobsen & Andersen, 2015; Rainey & Steinbauer, 1999; Shamir & Howell, 1999; Yukl, 2012). Specifically, leadership is a key factor in harbouring the level of psychological safety and the commitment to EIPM throughout the organization (Edmondson & Lei, 2014; Groeneveld & Janssen, 2023; Liu, Hu, Li, Wang, & Lin, 2014; Newman, Donohue & Eva, 2017; Shitrit et al., 2023; Torenvlied et al., 2022).

2.2.3 Voice behaviour

When psychological safety is examined at an individual level, as we do in this study, we find that the main outcome relevant to this study is voice behaviour (Edmondson & Lei, 2014; Newman et al., 2017). Voice behaviour could potentially challenge the status quo and would be positively influenced by a higher level of perceived psychological safety, thereby ultimately enhancing organizational learning (Edmondson & Lei, 2014; Newman et al., 2017).

There are multiple definitions for voice behaviour in the literature. Voice is broadly defined as *"as upward-directed, promotive verbal communication"* (Edmondson & Lei, 2014, p.27) or more narrow as employee voice "*Intentionally expressing work-related ideas, information, and opinions*" (Dyne, Ang & Botero, 2003, p1363). Both definitions rely on the core principle that the employee voices their thoughts related to their work, on the work floor (Dyne et al, 2003; Edmondson & Lei, 2014). Furthermore, there was a study to that build further on the definition by Dyne et al. (2003) that also used the construct of psychological safety by Edmondson (1999). Based on this research there were two types of voice could be identified: Promotive voice, that may benefit the organisation, and Prohibitive voice, that may harm the organisation, the researchers found that that psychological safety is strongly correlated with prohibitive voice behaviour (Liang, Farh & Farh., 2012). Furthermore, psychological safety exhibits a positive (mediating) relationship with regard to voice behaviour. (Ashford et al. 1998; Frazier et al, 2017; Miceli & Near 1992; as cited in Edmondson & Lei, 2014).

Literature from within the realm of public administration show how voice behaviour expresses itself under different circumstances, most noticeably for this research that psychological safety is positively related to voice. Research on the role of psychological safety

and public service motivation (PSM) within the civil service at a local government level has revealed that both psychological safety and PSM play a mediating role in regard to whistleblowing intentions (Potipiroon & Wongpreedee, 2021). Within the context of "unprincipled" political principals and where the associated policy is perceived to lack alignment with democratic legitimacy and integrity, civil servants would be more inclined to engage in voice behaviour if they exhibit a high level of PSM (Schuster et al., 2022). Finally, it has been shown that that employee voice enhances innovative behaviour (Tsameti et al, 2023). A critical note would be that although these studies take place within the civil service; however, they occur within different cultural contexts under different circumstances (Thailand, Brazil and Greece, respectively).

2.3 Conceptual framework

In this chapter, the literature review will be synthesised into a robust conceptual framework. An exact definition is provided for each variable, and the casual relationships between the variables are clearly mapped out, building towards the formulation of the hypothesis.

2.3.1 The dependent variable: Commitment to EIPM

This framework acknowledges different forms of evidence and the complex environment of which top-level civil servants operate in, thus as stated before the term EIPM has been adopted and clearly justified (Ansell & Gash, 2008; Boyne & Meier, 2009; Bryson et al., 2015; Head, 2016; Newman et al., 2016; Newman, 2017; Shitrit et al., 2023; Torenvlied et al., 2022).

In order to capture the top-level civil servants commitment to EIPM there are two components. Firstly, there is the prioritisation of EIPM, leading individuals to actively seek out (new) evidence in their work. Complemented by the second component OPL, where the emphasis lays on how top-level civil servants behave when confronted with evidence that shows a mismatch between intentions and outcomes of policy, with the aim of learning from this.

Component I of Commitment to EIPM: Prioritisation of EIPM

This component acknowledges the role of the individual and the role of evidence in the policy making process (Head, 2016; Newman, 2017; Shitrit et al., 2023; Torenvlied et al., 2022). Specifically, within the scope of this research this component places emphasis on the individual stance of top-level civil servants their commitment to EIPM, which is highlighted as one of the most impactful dimensions, where the leaders themselves have an impact on culture fostering of EIPM throughout the entire organisation (Cantarelli et al., 2023; Head, 2015; MacKillop & Downe, 2022; Shitrit et al., 2023; Torenvlied et al., 2022).

Thus the premise is that someone committed to EIPM also prioritizes it in their work. After all, the definition of "*prioritisation*" is the action or process of deciding the relative importance or urgency of a thing or things, while "*commitment*" refers to the state or quality of being dedicated to a cause, activity, etc.[14] The assumption here is that if someone is committed to EIPM, they prioritize it accordingly.

Component II of Commitment to EIPM: Organisational policy learning

This component is based on the article of Argyris (1977) and adjusted by based on the work of Auqui-Caceres & Furlan (2023), Edmondson & Tucker (2003), and Van Der Knaap et al. (2020). In this study, OPL contains to how individuals deal with a mismatch in policy intentions and outcomes, where there is a distinction is made between SLL and DLL. SLL involves individuals attempting to correct a mismatch between intentions and outcomes by simply adjusting their actions, resulting in policy improvement while maintaining the status quo (Argyris, 1977; Van Der Knaap et al., 2020; Auqui-Caceres & Furlan, 2023; Edmondson & Tucker, 2003). Conversely, DLL occurs when policymakers address the underlying assumptions, goals, norms, and values of the policy, potentially leading to fundamental changes in the policy itself and ultimately become a learning organisation (Argyris, 1977; Van Der Knaap et al., 2020; Auqui-Caceres & Furlan, 2023; Edmondson & Tucker, 2003). Where DLL has two components: a cognitive (thinking) and behavioural (doing) component, whereby the behavioural component is split up between model I (avoiding negative consequences) and Model II (using the correct information) (Argyris, 1977; Auqui-Caceres & Furlan, 2023).

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[14] Based on the definition provided by the Oxford English Dictionary

What SLL and DLL share is the attempt to correct a mismatch between intentions and outcomes (Argyris, 1977; Van Der Knaap et al., 2020; Auqui-Caceres & Furlan, 2023; Edmondson & Tucker, 2003). Where they differ is that DLL challenges the status quo is, with DLL leading to fundamental changes in policy itself and ultimately fostering a learning organisation as opposed to SLL (Argyris, 1977; Van Der Knaap et al., 2020; Auqui-Caceres & Furlan, 2023; Edmondson & Tucker, 2003). Thus by many DLL is more valued than SLL because it can lead to fundamental changes and actual learning from new evidence, rather than just adjusting existing indicators of policy (Argyris, 1977; Van Der Knaap et al., 2020; Auqui-Caceres & Furlan, 2023; Edmondson & Tucker, 2003).

2.3.2 The independent variable: Psychological safety

As stated before the definition of psychological safety by Amy Edmondson's is chosen, because this a well-established construct known to positively influence organizational outcomes across various levels (Ashford et al. 1998; Miceli & Near 1992; as cited in Edmondson & Lei, 2014; Edmondson & Lei, 2014; Liang et al., 2012; Tsameti et al, 2023).

A psychological safe work environment can create a climate that encourage certain types of behaviours, including improved information sharing mechanisms (Edmondson & Lei, 2014; Newman et al., 2017). Moreover, by allowing space for dialogue and reflection, it can create the right conditions that potentially contribute positively to what is labelled within this framework as commitment to EIPM (Argyris, 1977; Edmondson, 1999; Edmondson & Lei, 2014; Hedlund & Osterberg, 2012; Newman et al., 2017). The opposite of this would also hold true, meaning that a low psychological safe work environment would have the opposite effects on the mentioned types of behaviours and subsequent organisational outcomes (Edmondson, 1999; Edmondson & Lei, 2014; Hedlund & Osterberg, 2012; Newman et al., 2017).

2.3.3 The mediating variable: Voice

Particular relevance to our study is the potential role of voice behaviour as a mediator between the independent and dependent variable. Since it becomes apparent that a higher degree of psychological safety is positively related to voice behaviour (i.e. promotive and/or prohibitive voice), which in turn could have a positive influence on innovative behaviour, organizational performance and learning behaviour (Ashford et al. 1998; Miceli & Near 1992; as cited in Edmondson & Lei, 2014; Edmondson & Lei, 2014; Liang et al., 2012; Tsameti et al., 2023).

2.3.4 Hypothesis

The conceptual framework suggests that an elevated level of psychological safety could potentially positively impact commitment to EIPM, whereby this relationship is potentially mediated through voice behaviour. The conceptual framework gives us the following hypothesis, see figure 1 for a schematic overview of the hypothesis:

Hypothesis I

H0: There is no relationship between psychological safety and commitment to EIPM.

H1: There is a positive relationship between psychological safety and commitment to EIPM.
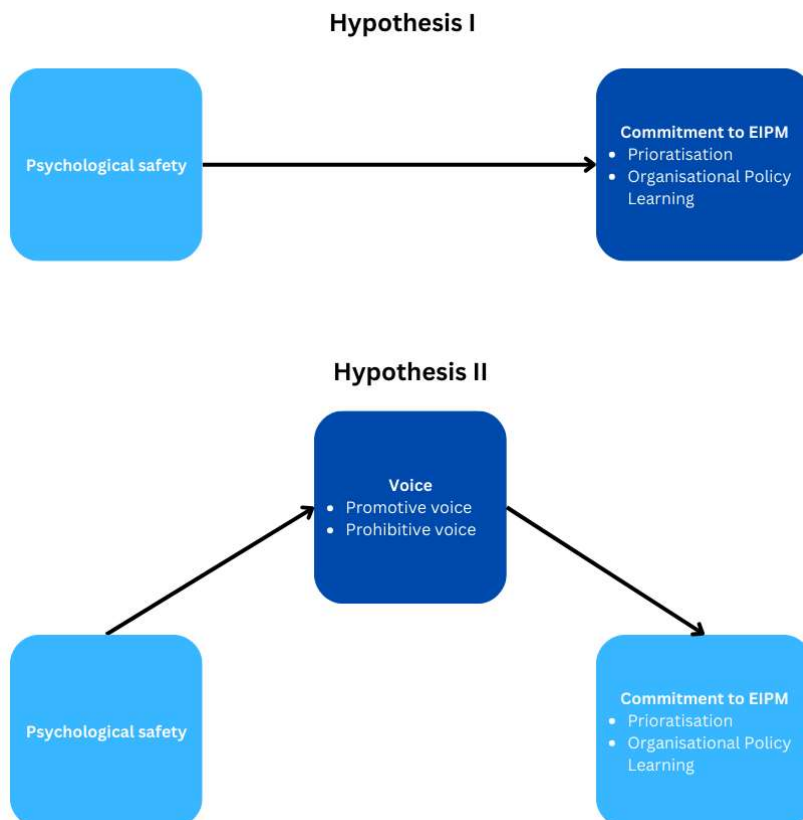
Hypothesis II

H0: There is no positive relationship between psychological safety and commitment to EIPM, which is mediated by voice.

H1: There is a positive relationship between psychological safety and commitment to EIPM, which is mediated by voice.

Figure 1

Schematic overview of the hypothesis

3. Methods

In this chapter the method of data collection will be justified, followed by the operationalisation of the variables and finally a reflection on the validity, reliability and contextual factors of this study.

3.1 Data collection

This cross-sectional survey has been designed according to a adopted approach as the steps as laid out in Neuman (2014). The following subchapter will explain how and why the steps were conducted. To maintain a logical order, the reasoning behind choosing the type of survey will be elaborated upon first, followed by an explanation of the population and sample selection, and survey distribution. Finally, the survey design and the use of platforms will be discussed. See the Appendix A for the survey as distributed to the respondents.

A web survey design appeared to be the most feasible method, as it would allow me access to the entire population of top-level civil servants spread across the national government within the limited time frame I had during the internship and for this study. Furthermore, a web survey is considered the cheapest and fastest way to deliver a survey, where different types of questions can successfully be applied (Neuman, 2014). By doing so, I hoped to reach what would normally be a hard-to-reach group for students within the limited timeframe and means available to me. Moreover, a survey with a high enough response rate can be subjected to statistical analyses, thereby allowing the mechanisms central to the research question to be investigated.

The case selection comprises top-level civil servants within the Dutch central government. According to the most recent available numbers the population exists of a total of 1966 SCS'ers, this included 1,181 managers at paygrade 15 (department heads, project managers, program managers), 682 managers at paygrade 16 to 18 (directors, program directors, project directors), and 103 members at paygrade 19 (the top management group (TMG)), approximately 43% of SCS members are female (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2023).

The type of survey distribution was based on deliberation with my contact at the SCS, emails and an online survey was the preferred method of communication. Initially I employed a very broad approach to increase the chances of getting a reasonable survey response rate, where everyone in the population would get an equal chance to participate in this study. I had

the opportunity to include a paragraph of text and an accompanying link in the monthly newsletter of the SCS, distributed on May 15, 2024. However, the initial distribution method did not yield the desired results. The response rate was lower than anticipated; in the first week, only a few (N=3) respondents started the survey, none of whom completed it. Subsequently on May 22, another promotion was attempted on LinkedIn, resulting in some additional respondents. However, it's important to note that the survey couldn't be openly shared to mitigate the risk of non-SCS personnel participating. To address this, the LinkedIn post only referred the monthly email where the URL to the survey could be found. The LinkedIn post was also reposted by the SCS account and several others with a network within the central body of government. From that moment up until the 11th of June, I tried to leverage my personal network within the internship at BZK in order to increase the response rate, this included sending out emails with a link directly to different committees within the central body of government related to social safety. At this point in time the total effective response rate of those who completed the survey was extremely low at only 11 out of the 1966 (0.56%) of the population. Furthermore, at first I estimated that it would take maximum of 15 to complete the survey. However these initial respondents took less than 5 minutes to complete the survey, so I changed the opening page and further communication from thereon to reflect this. To increase the response rate to an acceptable amount on the 12th of June I send out personalized emails to the SCS target audience. This data was collected by: First, checking the TMG group on the website, as these appointments are publicly available. Then, checking the organizational charts of all the relevant organizations that have people appointed to them by SCS to identify possible respondents. Additionally, searching for positions such as those commonly used within the SCS (i.e. director, manager) within the internally available government portal. These names were double-checked via news reports from the SCS where individuals were appointed to specific positions. Furthermore, all email addresses were obtained through the government portal. In total, I sent out 608 personalised emails. This new approach yielded 110 new responses, giving this method the highest response rate of 18.1%. Finally, the survey was closed on 01-07-2024.

On the design of the survey, at first the hypothesis was developed according to the frameworks as laid out in chapter 2.3. This framework also forms the basis of the operationalisation of the variables as will be laid out in the next subchapter. Furthermore, it is important to note that this survey was specifically designed for this research. Since the population is in the Netherlands, the survey was conducted in Dutch. Also, there are a total of

21 questions, it was chosen to keep the survey relatively short in order to increase the changes of obtaining complete responses. The survey started with a informed consent form. Moreover, the background information was kept to a minimum, since the scope of the study does not require further details, only to check the background information with the available data from the SCS year report which are gender and SCS profile.[15] Additionally, the gender variable is not binary; multiple response options are allowed, and respondents have the choice not to answer this question. All other answers are mandatory in order to complete the survey. Moreover, it is essential to acknowledge that since this is a survey about perception, we measure the individual perception of the respondents, we measure how they view and say that they themselves act. Finally, the survey underwent proofreading by two SCS employees to ensure alignment with accustomed jargon, trying to prevent any possible confusion in interpretation. Additionally, my supervisor reviewed the survey, particularly the EIPM section, her specialty, to enhance its alignment with academic standards, however the part on OPL was subjected to some last minute changes not reviewed by her. Moreover, an academic expert specializing in psychological safety with experience conducting research for the Dutch government, offered suggestions for improvement on the items related to psychological safety.

The platforms that was used for data collection is Qualtrics. Where I assured the survey would be conveniently to make on both a computer, tablet or phone. The statistical analyses were conducted using Stata, which will be discussed further during the analysis.

3.2 Operationalisation of the variables

In this subchapter the operationalisation of the variables will be discussed. See Appendix B for the English version of the survey, where all items, answer options, levels of measurement, and analyses are clearly described. Additionally, all variables are coded in accordance with the conceptual framework, methodology, and analysis.

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[15] The domain option was not of any particular relevance in this case at this point in time, since there was no data from the ABD to compare this information with. But other studies like ICTU (2022) have shown that the domain can change the perception of psychological safety in a Dutch government wide study. This was proven of no particular relevance for the results in this study as will later be discussed during the analysis.

3.2.1 Measuring component I of Commitment to EIPM: Prioritisation of EIPM

This component highlights the role of the individual top-level civil servant and how they prioritise EIPM (Cantarelli et al., 2023; Head, 2015; MacKillop & Downe, 2022; Shitrit et al., 2023; Torenvlied et al., 2022).

The questions used to measure this variable are adapted based on a component used in the questionnaire of the study "*Empirically Informed Policy (EIPM) in the Flemish Government*" by Raymaekers P., De Smedt P., Pattyn V., & Migchelbrink K. (2023).

This variable exists of three items, where the average score of all three items will be used to assess the prioritisation of EIPM. These items have a Cronbach's alpha of 0.6637, which is deemed questionable.

3.2.2 Measuring component II of Commitment to EIPM: Organisational policy learning

The emphasis here lies on how respondents deal with a mismatch between policy goals and outcomes, which is the core focus of both SLL and DLL. Both Likert scales and open-ended questions are utilized to gain a better understanding of how respondents act.

Initially, respondents are asked to what extent they attempt to rectify a mismatch in the case of a discrepancy between the intentions and outcome in light of new evidence. This provides insight into the extent to which individuals are inclined towards learning behaviour, which can be either SLL or DLL. Subsequently, an open-ended question inquires about their usual approach when faced with a situation where there is a mismatch. The reasoning behind this question is to gain insight into whether their typical way of handling such situations leans more towards SLL or DLL. The follow-up question explicitly asks respondents to choose between SLL or DLL by our definition. In the event that DLL is chosen, an conditional question appears on a new page. Here, respondents are asked about theory in use, where the answer options distinguishing between Model I, Model II and other.

3.2.3 Measuring: Psychological safety

First and foremost, it is important to note that, given the research question and its target audience, the measurement focuses on the individual perception of psychological safety. There are two approaches here. One can create a proxy measurement where individuals "*constructed their own measures of supervisor- and colleague-focused psychological safety*" or one can use a modified scale as seen in previous studies, or adapt the word "*team*" in the questions to "*organisation*" (Newman et al., 2017. p. 522). I opt for the second option, as it aligns with the

work within current research within the Dutch government and makes the result of this study comparable (Newman et al., 2017; Groeneveld & Janssen, 2023; ICTU, 2022). Even more important, proxy measurements, as in the first case, can deviate from the definition of the construct of psychological safety as stated by Edmondson, which negatively impacts the validity and, by extension, the reliability of the results (Edmondson & Lei, 2014; Newman et al., 2017). The method that has been chosen is subject to scientific scrutiny and has stood the test of time, moreover, it has demonstrated reliable internal validity (Edmondson & Lei, 2014; Newman et al., 2017).

The standard seven items were used in order to gauge the level of psychological safety, a 7-point Likert scale was chosen instead of the more common 5-point scale to align with the other variables in the survey. This in order not to cause any potential confusion for the participants. Moreover, it can provide a more nuanced insight into the different perceptions, as the population[16] generally tends to rate psychological safety higher (Groeneveld & Groeneveld & Janssen, 2023). By broadening the scale, differences may be observed more easily.

These measurements will give insights into the various components that make up psychological safety as well as an average score. These 7 items have a Cronbach's alpha of 0,8393, which is considered good.

3.2.4 Measuring: Voice

Based on this conceptual framework there were two types of voice could be identified: promotive voice, that benefits the organization and prohibitive voice, that may harm the organization (Liang et al., 2012).

The original scale, well-known for measuring the two types of voice, was developed by Liang et al. (2012), and it has been translated and adapted to the Dutch context by Sijbom and Koen (2021). Based on this Dutch adaption, the phrasing was slightly adjusted to fit the context of the sample, replacing "*team*" with "*organization*" as was done with psychological safety in order to align the level of analysis. Additionally, where there are normally 10 questions in total, 5 for each category of voice, in this study this was shortened to two questions for each type of

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[16] In the recent government wide report into social safety by Groeneveld & Janssen (2023), over 60% of the leadership (NL: *leidinggevenden*) selected 'agree' on 5 of the 7 items in the scale, on a 5 point Likert-scale.

voice that best fitted the scope of this research and adapted the questions slightly in order to fit the position of top-level civil servants.

These measurements will give insights into the two types of voice, an average score will be used for each type of in the analysis. These 4 items have a Cronbach's alpha of 0,8766, which can be considered good.

3.3 Reflection: validity, reliability and contextual factors

Finally the reflection on the validity and reliability, also in accordance with Neuman (2014). With a special role in the end for the contextual factors that might have had impact on this study. Furthermore, it is important to take notice that this is the initial reflection, during the analysis and discussion there will be more attention to the specific issues that arise wherever relevant.

3.3.1 Validity

First, the external validity, or the extent to which the results of the research are representative and thus generalisable. Based on a population size of 1966 SCS members, the number of respondents needed to make statements within a certain margin of confidence depends on several factors, including the desired level of the confidence interval and the margin of error (MOE). The original aim was to achieve at least a minimum of 66 respondents, which would mean that statements could be made with a confidence interval of 90% and an MOE of 10%. Eventually, after cleaning the dataset, there was a total of 121 respondents. This results in the ability to make statements about the SCS with a finite population of 1966 and a confidence interval of 95% within an MOE of approximately 8.6%. Which translates to the following: we are 95% confident that the true population parameter lies within 8.6% of the sample estimate. In the analysis, see chapter 4.1.1, the results of the survey will be checked for representativeness with respect to relevant background characteristics. This will allow us to compare the results with existing data on the composition of the SCS to more accurately assess the representativeness of our sample.

Moreover to enhance the external validity, distributing the survey exclusively to the SCS target audience is ideal for measuring top civil servants in the Netherlands. This group solely comprises top civil servants, allowing for results to be generalized within certain margins for this population, thus enhancing external validity. At first I implemented a strategy to ensure that only the target population had access to the survey, taking measures to mitigate the risk of

unauthorized access, thus safeguarding the research's validity. When sending out the personalised emails at a later stage, I took several measures: I specified in both the personal email as well as the landing page of the survey that the target group was people from the SCS, and a question about which pay grade they were in with the corresponding titles in the survey itself to double check if they are actually part of the SCS. However, when sending personalised emails I got a few (N=3) emails asking for clarification if they were the target group. One of those was not, I asked this person not to participate in the survey and she complied.

Furthermore to safeguard the content, face, construct, and internal validity, appropriate measures were taken. Firstly, the models used to measure the constructs of psychological safety, voice, and prioritisation of EIPM are based on existing models utilized in previous research. Particularly, psychological safety and voice models have stood the test of time, having been refined and tested for validity over several years. There isn't a definitive method to measure OPL, but to enhance validity, the model was constructed based on various academic sources capturing the concept, including a meta-study that provided concrete recommendations for improving conceptualization and measurement, integrated into the model used.

However, there was some confusion over the exact terms used. I personally received this feedback from people in my immediate circle as well as a few emails (N<8) indicating that they found OPL a component that was hard to understand. This is partly due to one of the major shortcomings of this research: the lack of sample testing, despite consultations with academic experts and professionals as previously mentioned in the essential background information.

3.3.2 Reliability

Where there is measurement, stability and representative reliability as in accordance with Neuman (2014).

In this case the instruments used to measure are all well researched for all the concepts with the exception of OPL. Moreover the concepts are clearly conceptualised, use a precise level of measurement and multiple indicators and have been tried and tested before. Indicators such as the Cronbach's alpha and further analysis will underscore these findings. Thus it can be concluded that most instruments used are reliable.

However, the conceptualisation of Commitment to EIPM is new, and self-constructed specifically designed for this research. Where prioritisation is based on pre-existing research, OPL is not. Since there were no pre-existing frameworks that fitted this research design. In order to ensure reliability, the concept was conceptualised in accordance with various sources

as indicated in the conceptual framework. Using with multiple indicators, corresponding with multiple levels of measurements to gauge the level of OPL. However this part of the questionnaire was not subjected to sample-testing as mentioned before due to different constraints as can be read throughout the this chapter. Moreover a conceptual error was made in regard to the answer option SLL (of variable OPL2), this error will be addressed in greater detail in the discussion.

Furthermore, a reflection on the representative reliability is not directly relevant here, as it concerns the same group. Nonetheless, later in the analysis, it will be shown that when the groups are subdivided based on their background characteristics, there are no significant differences in the results, which benefits the representative reliability. An attempt was made to ensure equivalence reliability by using multiple indicators to measure this construct. The idea was the answer to OPLcheck could be backwards coded into either SLL or DLL. However, respondents found it confusing, this is observed because the responses showed different interpretation of the question, ranging from no response to very detailed answers. More on this will be discussed in the analysis.

3.3.3 Contextual factors

It is also important to take notice that social safety is a topic that is sensitive, especially considering the role of leadership. Particularly since the population is not only in the public eye, but also held responsible for social safety themselves.[17]

This can potentially give rise to the socially desirability bias and impact both the validity as well as the reliability in this particular research design. Since this is a survey where the respondents self-report, this can possibly affect this research by respondents being aware of these circumstances and this can lead to giving socially desirable answers.

Furthermore this could have had impact on the willingness to respond to this survey, which might have negatively impact the response rate.

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[17] See FNV: 'Angstcultuur' en 'giftige werksfeer' bij ministerie van volksgezondheid by Waterval (2024) for example, when a union released a rapport in February of this year, where particularly the leadership within the ministry of Ministry of Health, Welfare and Sport was held responsible for creating an unsafe work environment. Moreover, the FNV continued conducting research on social safety during the subsequent period at other ministries, see the report Sociale Veiligheid bij het Ministerie van Justitie en Veiligheid by FNV (2024) of June from this year.

In order to mitigate these potential issues mentioned in this subchapter, it was made clear that participating is not only voluntary but also completely anonymous and that the results will only be shown on an aggregated level and will not be traceable back to any ministry or individual.

4. Analysis

In this chapter the results of the survey will be analysed in accordance with the conceptual framework and the methods. First, the descriptive statistics will be elaborated upon, followed by the explanatory statistics. Whereby the second subchapter is divided between two analysis, corresponding with the first and second hypotheses.

All tables and figures are based on N=121, except for Table 4, where OPL3 is based on N=112. This number of observation is lower due to OPL3 being a conditional question.

Furthermore, in this chapter the reported mean, standard deviation, variance, skewness and kurtosis have been rounded up to one decimal point, the percentages up to two decimal points so the total score becomes 100%.

4.1 Descriptive Statistics

This subchapter will begin with an analysis of the background information, followed by an examination of representability. In this chapter, we reverse the usual order in which the concepts are mentioned to maintain a logical flow of the analysis. This means we start with an analysis of psychological safety, followed by voice, and finally the two components of commitment to EIPM. Finally, a conclusion on this subchapter is presented.

An important side note for this chapter is that when discussing the answer options for statements ranging from strongly disagree to strongly agree, the term 'at least agree' includes the answer options 'agree' and 'strongly agree.' Similarly, when the text states 'at least partly disagree,' it includes the answer options 'partly disagree,' 'disagree,' and 'strongly disagree' for example.

See Appendix C for an overview of the exact measurements as mentioned during the descriptive statistics.

4.1.1 Background information

This subchapter starts with a broad summary of the background information, followed by an analysis discussing the representability of the sample, with a more in-depth approach than previously covered in the methods.

Since all variables for the background information are nominal variables in, the discussion will focus solely on the mode, in other words, their frequency and distribution. Special attention

is given to the proportion of the sample relative to the actual population. Since analysing the individual components of the background information in relation to other variables falls outside the scope of this study, it will not be reported on in detail.

Table 1

Background Information: Gender Distribution in Sample Compared to Actual Population

	Observed		Actual
	Frequency	Percentage	Percentage
Male	67	55,37%	57%
Female	49	40,50%	43%
Prefer not to say	5	4,13%	
Total	124	100,00%	100%

Note. The actual numbers are based on the most recent available year report by the SCS (Jaarverslag Algemene Bestuursdienst 2023)

As shown in Table 1, there are more men than women who participated in the survey; however, the ratio of men to women in the sample closely approximates the distribution within the population, deviating by only about ±2,5%. In addition, a relatively small number (N=5) chose the response option not to disclose their gender.

Table 2

Background Information: Pay grade Distribution in Sample Compared to Actual Population

	Observed		Actual		
	Frequency	Percentage	Frequency	Percentage	Observed / Actual
SCS-managers (paygrade 15)	28	23,14%	1109	56,41%	2,52%
SCS-topmanagers (paygrade 16-18)	73	60,33%	658	33,47%	11,09%
Topmanagementgroup (paygrade 19)	20	16,53%	109	5,54%	18,35%
Total	121	100,00%	1966	100%	6,15%

Note. The actual numbers are based on the most recent available year report by the SCS (Jaarverslag Algemene Bestuursdienst 2023)

Looking at the distribution of pay grades in Table 2, we observe that pay grade 19 appears relatively more frequently in the sample (16.53%) than in the population (5.54%), whereas pay grade 15 is underrepresented (23.14% observed compared to 56.41% actual).

Moreover, pay grades 16-18 are overrepresented in the sample, with 60.33% of the respondents making up this group.

The proportion of the frequency in the last column shows the observed sample as a part of the actual sample, whereby the total sample size constitutes 6.15% of the total population.

Table 3

Background Information: Domain Distribution in Sample Compared to Actual Population

	Frequency	Percentage
Policy	46	38,02%
Execution	30	24,79%
Inspection	12	9,92%
Business operations	17	14,05%
Other	16	13,22%
Total	121	100,00%

Regarding the distribution of the domains, policy and execution are predominant, together comprising just under two-thirds of the total (62.9%). For the 'other' option, respondents indicate they work in-between these domains (N=3) and the other respondents in this category report specific departments that will not be discussed further, as it adds no value to the analysis and has the potential for traceability.

Currently, there is no data available on the distribution of domains within the SCS for comparison.

Representability

As mentioned in the methods section, we will now explore the representability of the sample in more detail. Table 1 shows that the gender distribution in the sample closely aligns with the actual population. Nevertheless, Table 2 illustrates that pay grade 15 is underrepresented and pay grades 16-19 are relatively overrepresented.

4.1.2 Psychological safety

As illustrated in figure 2, respondents generally rate their psychological safety on the higher end of the spectrum. When looking at the total score (PsT (A)), approximately 47% of

the respondents at least 'agree' with the statements, and when including those who 'partly agree', this rises to over 87,6% of respondents.

When evaluating the individual items[18] more nuances can be observed. Statements 1, 2, and 7 score the highest, where over two-thirds of respondents indicate that they at least 'agree' with these statements. These items respectively measure the extent to which individuals feel they can bring up difficult issues, ask others for help, and do not feel hindered by colleagues within the organization. These numbers respectively rise to 90,08%, 92,56% and 58,13% when the answer option 'partly agree' is included.

In contrast, Ps6 stands out as an item that scored the lowest in comparison with all others. Ps6 items assesses how safe the individual feels to take risks within the organization. Here, 21,48% of respondents fall within the category '(partly) disagree', which is significantly higher than for the other items, which lies between 4,96% and 10,74%. Conversely, only about 28,93% at least 'agree' with this item, noticeable lower (as compared to 47,11% and 73,55%) than the level of agreement on the same answer options as seen on the other items.

Figure 2

Comparison of Percentage of Agreement for Psychological Safety

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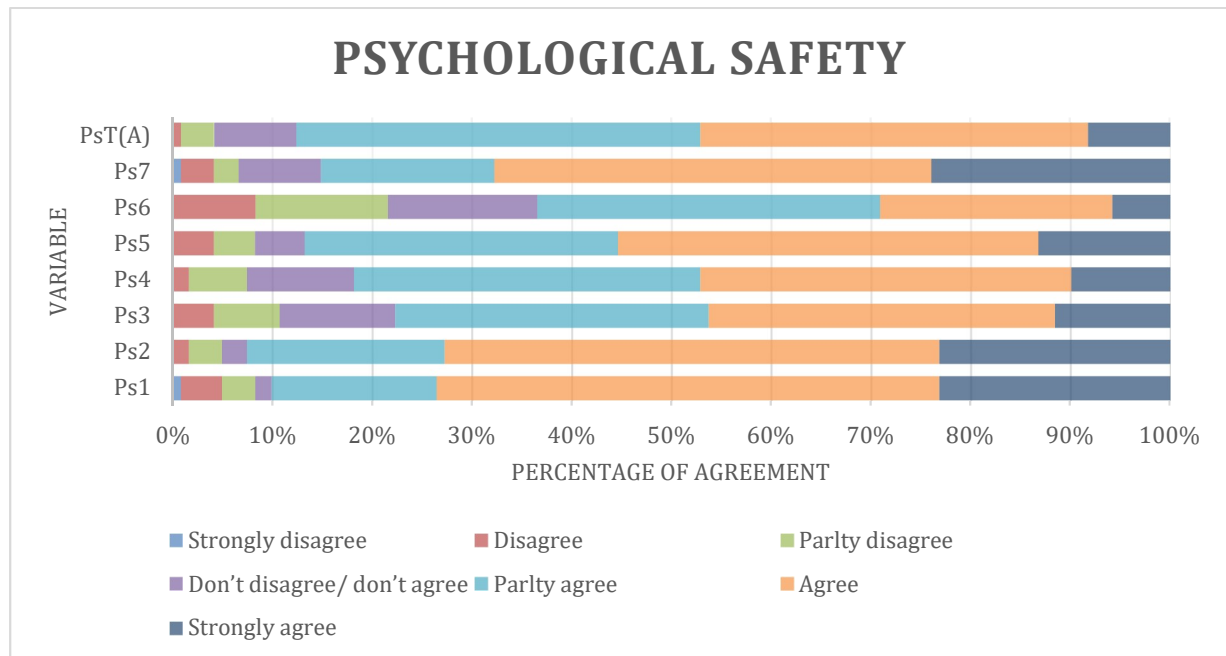
[18] Not including PsT (A)

Regarding the other measurements that address central tendency and the dispersion: The same distribution pattern is observed here for all items. The mean for all items ranges between 5.2 and 5.8, except for Ps6, where it is significantly lower at 4,7. The standard deviation ranges between 0,9 and 1,3. The variance ranges from 0,7 to 1,8. All skewness values are negative (between -1,7 and -0,4), and the kurtosis is positive (between 2,4 and 6,1).

4.1.3 Voice

When examining the variable voice, it becomes clear from figure 3 that the most respondents (>75%) at least agree with all the statements. There are no respondents who strongly disagree, and disagreement accounts for less than 1% for each item individually. When comparing the two types of voice (both the individual items and their average ratings), it is noticeable that promotive voice has relatively higher agreement compared to prohibitive voice. This difference stems from respondents choosing the option 'partly agree' more often for prohibitive voice, whereas they tend to favour the option 'agree' for promotive voice.

Most noticable Vb2 stand out as the statement with the least repsondents choosing 'strongly agree' and the most respondents choosing to at least 'disagree' (up to 'partly agree'), this statements measures the extent to which respondents agree with the statement "*I dare to point out problems when they arise within the organization, even if it may hinder relationships with other colleagues*".

Regarding the other measurements related to the central tendency and the dispersion: The same distribution pattern is observed along all items. The mean for all items ranges between 5,9 and 6,2. The average standard deviation lies is either 0,8 or 0,9. The variance ranges from 0,6 to 0,9. All skewness values are negative (between -1,3 and -1,9), and the kurtosis is positive (between 5,7 and 9,3).

Figure 3

Comparison of Percentage of Agreement for Voice
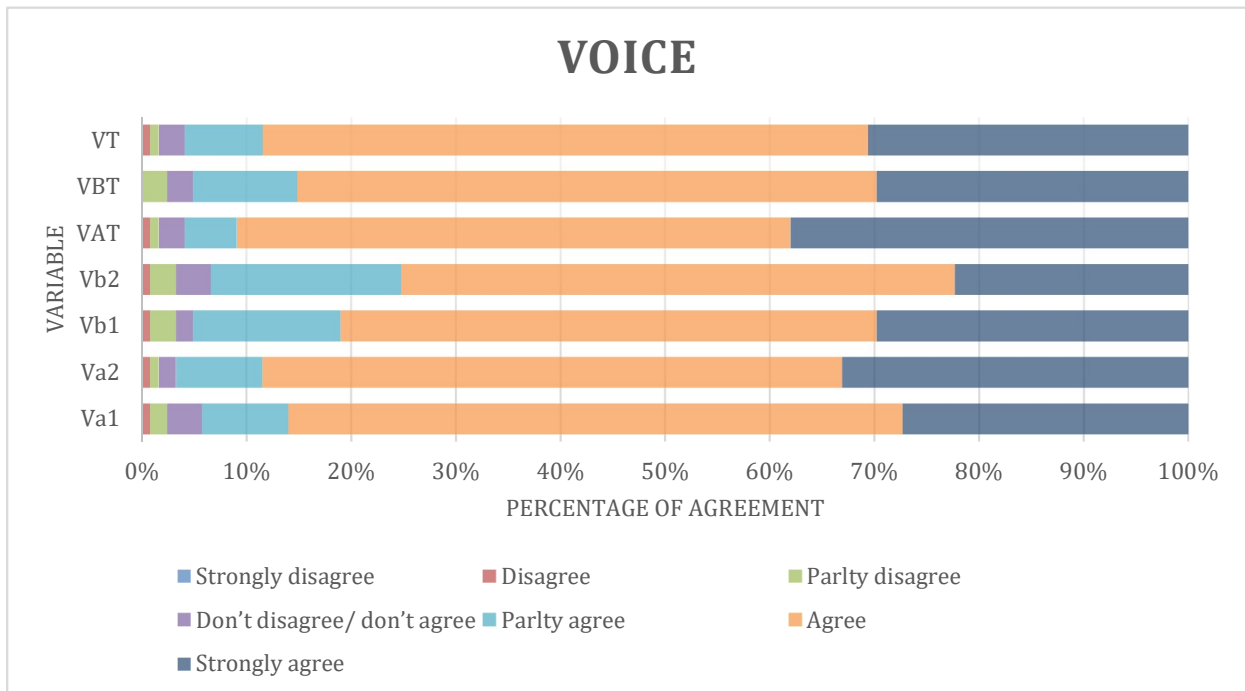
4.1.4 Commitment to EIPM

As shown in figure 4, regarding the prioritisation of EIPM, respondents indicate a high level of agreement, with at least 87% stating they at least 'partly agree' with these statements. Noticeably, P1 is the item with the most agreement, where 46,28 of the respondents 'strongly agree', this reaches up to 92,56% when 'agree' is included. Whereas P2 stands out as the item with the least agreement, where respondents indicate they at least 'partly disagree' (6.61%). Where P1 measures the extent to which respondents agree with the statement '*I value evidenced results*' and P2 refers to '*I regularly evaluate the programs and activities for which I am responsible*'.

The mean for all items ranges from 5,4 to 6,3, with a standard deviation between 0,8 and 1,2, and a variance from 0,6 to 1,4. Additionally, the skewness is consistently negative (between -2 and -1,1), and the kurtosis is positive, ranging from 4,6 to 10,6.

Figure 4

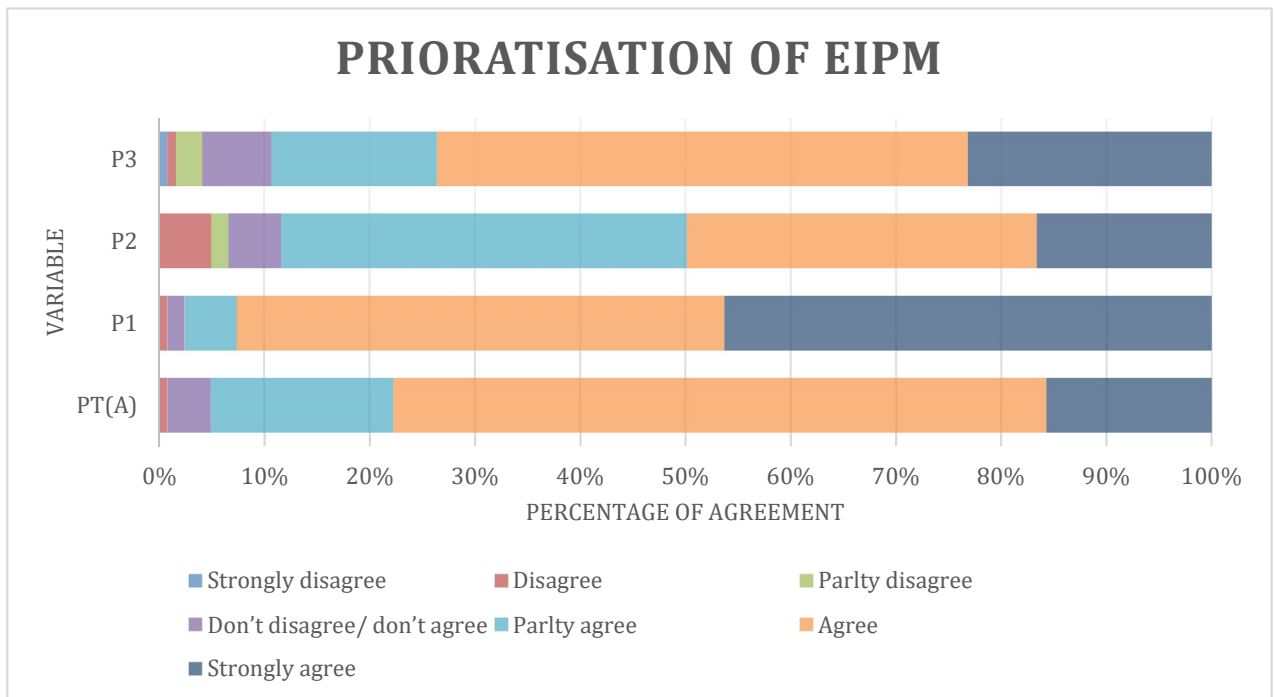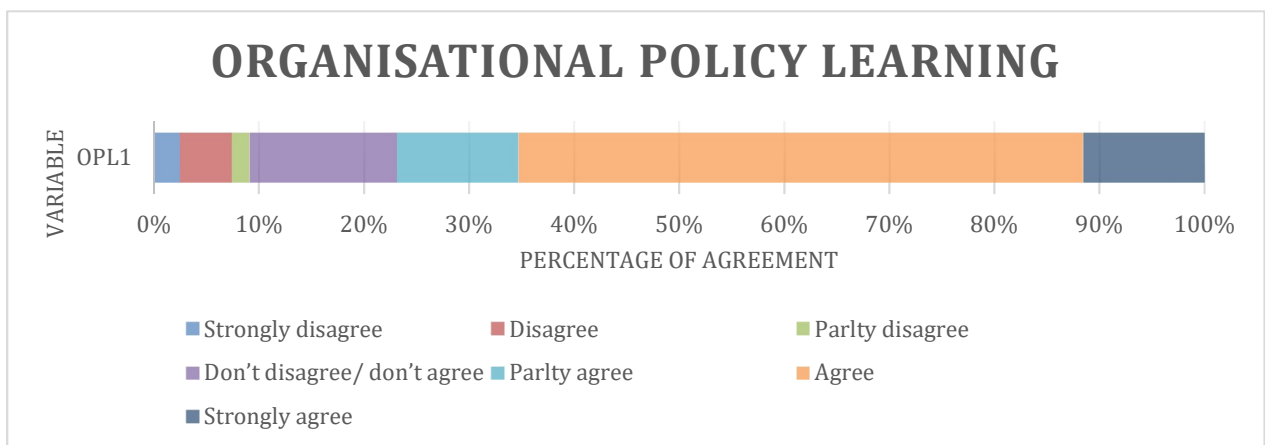*Comparison of Percentage of Agreement for Prioratisation of EIPM*

PRIORATISATION OF EIPM

Figure 5

Comparison of Percentage of Agreement for Organisational Policy Learning

ORGANISATIONAL POLICY LEARNING

The section on OPL consists of three items; Initially, the focus is on OPL1, followed by the evaluation of the other items. As indicated in figure 5, over 75% of respondents at least 'partly agree' with the statement 'When a discrepancy between intentions and outcomes is observed, I attempt to correct this mismatch'. On the other end of the spectrum, over 10% of respondents indicated that to at least 'partly disagree' with this statement. Finally 14,05% of the respondents indicate that they 'don't disagree/don't agree' with this statement.

This item has a mean of 5,3 and a standard deviation of 1,4 with a variance of 1,9. It is negatively skewed with a score of -1,4 and a kurtosis of 4,6.

Table 4

Distribution of Response Percentages for OPL2 and OPL3

Item	Response		
OPL2	SLL 9,92%	DLL 90,08%	
OPL3	Model-I 10,90%	Model-II 58,72%	Other 31,19%

As shown in table 4, the frequency distribution of the other items in this component reveals that when directly asked, over 90% of respondents prefer to address a mismatch by opting for DLL. Only those who choose this option can then select OPL3, which provides insights into the theory in use. Here, Model-II (correctly using information) is the preferred option, with just under a two-thirds majority choosing it. At a first glance there are no significant differences visible between the groups of respondents choosing OPL2 and OPL3 and the other variables, partly due to the low number of observations in the groups (about 10%) who choose SLL or Model-I, making it difficult to draw substantial conclusions.

However when the psychological safety is analysed by the individual items, OPL3, in combination with Ps6, stands out. In the case where Model-I is chosen, about 45.45% (N=5) of the respondents indicate they at least 'partly disagree' with the statement, while the same percentage (N=5) at least 'partly agree' with the statement for Ps6. For the other answer options (Model II and other) for OPL3 in combination with Ps6, the level of psychological safety tends to favour respondents selecting at least 'partly agree' with these statements. However, as previously mentioned in the prior paragraph, due to the relatively low numbers observed in this group (N=13), it is difficult to draw substantial conclusions based on this information.

When taking a closer look at the 'other' answer option, it appears that two reasons are frequently mentioned, both separately and often in combination with each other (55,88%, N=19). These reasons are 'achieving the goals' and 'serving the common good'. Where the goals often align with 'societal goals', involve the use of 'public resources' or mention either 'efficiency' and/or 'effectiveness' of said resources, while 'serving the common good' is in regard to benefiting society and the citizens.

4.1.5 Conclusion

Based on an in-depth analysis of the background characteristics, it can be concluded that the sample is more or less representative. However, with the notion that these results are likely more representative for paygrades 16-19 than for the SCS as a whole, due to the relative underrepresentation of paygrade 15 in the sample. Furthermore, the gender distribution closely matches that of the actual population, which positively contributes to the sample's representativeness. The consequences of this will be further elaborated upon in more detail in the discussion.

When examining the state of psychological safety, voice, and the prioritisation of EIPM, the results appear predominantly positive, assuming that more agreement is a good thing. Generally, both in terms of overall scores as well as the individual items, respondents indicate at least 'agree.' The exceptions here are items Ps6 and Vb2, which stand out within their respective categories as items with relatively less agreement. For Ps6, considerably more respondents indicate at least 'partly disagree,' and for Vb2, this seems to be due to a shift from 'agreement' to 'partly agree/partly disagree'.

Regarding OPL, it is evident that for OPL1, over 75% of respondents indicate at least 'partly agree' with the statement. Furthermore, DLL is the preferred answer option, with over 90% of respondents choosing this answer. Moreover, OPL3 provides insight into the theory in use, where the 'other' answer option revealed the emergence of a new category, which can be summarised as public (resource) management for communal benefit .

Based on the measurements, which provide insights into central tendency and dispersion, it can be concluded that the data is not normally distributed; it is negatively skewed and has a high peak (kurtosis > 2). This will have implications for the subsequent stage of the analysis, where appropriate statistical tests will be selected to accommodate this non-normal distribution.

4.2 Explanatory Statistics

This section examines the causal relationships between the variables, starting with Hypothesis I in subchapter 4.2.1, followed by a mediation analysis to test Hypothesis II in subchapter 4.2.2. Based on these analysis, the hypotheses will either be (partially) accepted or rejected.

4.2.1 Hypothesis I: The relationship between the independent and the dependent variable

To test the first hypothesis we initially use spearman's rho (ρ) to make statements about the correlation in order to measure the strength and direction of association between the variables. Additionally and ordered logistic regression will be performed to give more insight in the coefficients and p-values. First, the assumptions are checked and met for each type of test. Afterward, the appropriate statistical tests are carried out.

Spearman's rho

Spearman's rho is used to test for correlation between the independent and dependent variable. This option is chosen because the variables are ordinal and not normally distributed, thus a non parametric test is most suited (Sullivan & Artino Jr, 2013).

The assumptions of spearman's rho are: That the variables are measured on an ordinal, interval or ratio scale; the variables are paired observation; and there is a monotonic relationship between the variables (Laerd Statistics, n.d. -a). Assumption one and two are met due to the research design. And when checked[19] to see if there is a monotonic relationship between the variables, this assumption was also met. Now all the assumptions are met, we can continue using the spearman's analysis tests for the variables.

Furthermore, ρ can take on a value between -1 and +1, where +1 indicates a relationship where both variables move in the same direction, -1 means that the variables move in an opposite direction, and 0 means that there is no relationship between the variables (Prion & Haerling, 2014).

In this case the effect of the independent variable as captured PsT has been checked against the other variables that capture commitment to EIPM as seen in table 6.

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[19] Using the tabulate command in STATA.

Table 6

Model I: *Spearmans rho*

Variable	ρ
PT	0,3425
OPL1	0,1853
OPL2	0,0478

All of these values indicate that there is a positive relationship between PsT and commitment to EIPM, where the relationship between with PsT-PT is considered weak and the relationship with between PsT and the remaining variables of OPL are negligible (Prion & Haerling, 2014).

These results show that the relationship between psychological safety and prioratisation of EIPM are the strongest, and the relationship between psychological safety and OPL are negligible.

Ordinal logistic regression

The assumptions for the ordinal logistic regression are that the dependent variable is measured on an ordinal level and the independent variable is either continuous, ordinal or categorical, there are proportional odds and there is no multicollinearity (Laerd Statistics, n.d. -a; UCLA, n.d.). The first two assumptions are met due to the research design. To test for proportional odds the Brant test was used, these results showed that there were no proportional odds[20]. The test for multicollinearity also showed that this was not the case.[21] In preparation for the mediation analysis, these test was also conducted on the relationships between the mediators in combination with the other variables, the assumptions held true as well.

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[20] At $\alpha = 0,01$
[21] VIF = 1

Table 7

Model II: Ordinal Logistic Regression Analysis for Hypothesis I

Variable	Coefficient	Standard Error	Z	p-value	95% Conf. Interval	
PT	0,7660302	0,2076344	3,69	0***	0,3590742	1.172986
OPL1	0,4264446	0,2075146	2,06	0,040*	0,0197234	0,8331657
OPL2	0,1706366	0, 3418925	0,5	0,618	-0,4994603	0,8407336

*Note. * p<0,05; **p<0,01 *** p < 0.001*

Table 7 shows that the effect of PsT on PT and OPL1 is significant. The effect of PsT on PT is significant, with a coefficient indicating that if someone scores one level of agreement higher on PsT, it results in nearly an entire response scale higher agreement with the statement for PT. For the effect of PsT on OPL1, this effect is almost half a response scale. With 95% certainty, this effect ranges between 0.54 and 1.33 for PT, and between 0.15 and 0.88 for OPL1, again highlighting the positive effect that PsT has on both PT and OPL1.

The effect of PsT on OPL2 is not significant, with a p-value that is not below the α level set at 0,05. This is confirmed by the confidence interval that includes zero, indicating it is not statistically significant.

Conclusion

Based on the results of the spearman's rho test and the ordinal logistic regression it can be concluded that the effects of Psychological safety on two (PT and OPL1) of the four components of Commitment to EIPM are significant. In the first instance the spearmans rho indicates that there is a relationship between the variables and that this relationship is positive. Furthermore additional test support these findings and the low p-values and the confidence intervals not including zero show without a doubt that there a statistical significant relationship between the variables.

Thus for the first hypothesis the H0 can be rejected for PT and OPL1, and H1 is accepted.

4.2.2 Hypothesis II – Mediation analysis

      The Baron and Kenny (1986) method of mediation analysis is the most commonly used method to establish if there is a mediation effect between variables (MacKinnon, Fairchild & Fritz, 2007; Shah, Hashmi & Chishti, 2013). There are 4 conditions that must be met, these conditions correspond with 3 steps that need to be executed in order to give insights in the relationships between these variables (MacKinnon et al., 2007; Shah et al, 2013). First establish that there is correlation between the independent and the dependent variable, before it can be tested for moderation, this results in path c (MacKinnon et al., 2007; Shah et al, 2013). Step two is establish that there is a relationship between the independent variable and the mediator, in this case the mediator is treated as an outcome variable, which results in path a (MacKinnon et al., 2007; Shah et al, 2013). In step 3 a multivariate analysis is performed where the mediator is tested on the independent variable, with the dependent variable as a control variable, which results in path b and path c'. Whereby the results should be interpreted as follow: if path c'= 0, there is complete mediation and if c>c' there is partial mediation (MacKinnon et al., 2007; Shah et al, 2013). The effects are: the total effect (c = ab+c'), the direct effect (c' = c-ab) and the indirect effect (is c-c'= ab) (MacKinnon et al., 2007; Shah et al, 2013).

      In our case this translates into the independent variable being PsT, the mediators being VAT, VBT, and VT, and the dependent variable being PT and OPL1. Which translates into the two models which all measure the different types of voice on the different dependent variables, where model III measure the effect on PT, model IV measure the effect on OPL1. OPL2 is excluded from the analysis because as concluded in the previous subchapter there is no significant effect, thus the first condition is not met. Additionally path c has already been established in the previous chapter, and path a is the same in both models.

      As can be seen in table 8, as established in the previous subchapter there is a significant effect, thus condition one is met and path c is established. When examining path a, the variables remain significant and the coefficient even rises, indicating a slightly stronger effect (between 0,1774924-0,4468738) of PsT on the mediators in the absence of the PT. This effect indicates that the effect of PsT on all the voice variables is stronger that the effect that PsT has on PT, in other words, PsT is a statistical significant predictor of all types of voice behaviour.

Table 8

Model III: Mediation Analysis of the Effect of PsT on PT

Path	Variables	Coefficient	Standard Error	Z	p-value	95% Conf. Interval	
c	PsT --> PT	0,7660302	0,2076344	3,69	0***	0,3590742	1.172986
a	PsT --> VAT	0,9435226	0,2259945	4,17	0***	0,5005816	1,386464
	PsT --> VBT	1,212904	0,2405816	5,04	0***	0,7413724	1,684435
	PsT --> VTT	1,143064	0,2143642	5,33	0***	0,7229178	1,56321
b	VAT --> PT (PsT)	0,7767196	0,2516839	3,09	0,002**	0,2834282	1,270011
	VBT --> PT (PsT)	0,3181252	0,2514587	1,27	0,206	-0,1747249	0,8109753
	VT --> PT (PsT)	0,7894358	0,2851751	2,77	0,006**	0,2305029	1,348369
c'	PsT PT (VAT)	0,5759619	0,2172764	2,65	0,008**	0,150108	1,001816
	PsT PT (VBT)	0,6460547	0,2297254	2,81	0,005**	0,1958012	1,096308
	PsT PT (VT)	0,5275272	0,229818	2,30	0,022*	0,0770922	0,9779621

*Note. * $p<0,05$; ** $p<0,01$ *** $p < 0,001$*

Table 9

Model IV: Mediation Analysis of the Effect of PsT on OPL1

Path	Variables	Coefficient	Standard Error	Z	p-value	95% Conf. Interval	
c	PsT --> OPL1	0,4264446	0,2075146	2,06	0***	0,0197234	0,8331657
a	PsT (VAT)	0,9435226	0,2259945	4,17	0***	0,5005816	1,386464
	PsT (VBT)	1,212904	0,2405816	5,04	0***	0,7413724	1,684435
	PsT (VT)	1,143064	0,2143642	5,33	0***	0,7229178	1,56321
b	VAT --> OPL1 (PsT)	0,2749522	0,2274474	1,21	0,227	-0,1708364	0,7207409
	VBT --> OPL1 (PsT)	0,0195162	0,2411893	0,08	0,936	-0,4532061	0,4922385
	VT --> OPL1 (PsT)	0,2541214	0,2656974	0,96	0,339	-0,266636	0,7748787
c'	PsT --> OPL1 (VAT)	0,3362862	0,2216433	1,52	0,129	-0,0981267	0,7706991
	PsT --> OPL1 (VBT)	0,4177722	0,2335038	1,79	0,074	-0,0398867	0,8754312
	PsT --> OPL1 (VT)	0,3264237	0,2329429	1,40	0,161	-0,1301359	0,7829834

*Note. * $p<0,05$; ** $p<0,01$ *** $p < 0.001$*

When the final multivariate analysis is conducted, we find that the significance diminishes as more variables are added. However, it remains within acceptable margins for all variables except for VBT in path b. For VAT and VT, these remain significant in all instances and mediate the effect of PsT on PT to varying degrees. When comparing paths b and c', it becomes apparent that VAT partially mediates the relationship between PsT and PT. The coefficient decreases (by 0,1900683) from path c to c' which represents the indirect effect of

PsT on PT when controlled for with VAT. A similar observation can be seen when looking at VT, where the difference in effect for path c' is smaller (0.0,238503), yet it remains significant among all paths. The scenario for VBT is different; here, path b is not statistically significant, but path c' is. This indicates that VBT has an indirect effect of 0.1199755.

As shown in table 9, Model V, paths c and a remain unchanged from the previous model. In this model, no mediated relationship is found between the variables. This is indicated by p-values greater exceeding the 0.05. Moreover, this is confirmed by the 95% confidence interval, which include zero.

Based on this analysis, it is clear that all variables tested as mediators indeed act as partial mediators, as the coefficients for path c to c' decrease while still remaining significant. The null hypothesis (H0) can be rejected when considering the effect of PsT, mediated by VAT, VBT, and VT, on the first component of commitment to EIPM: prioritisation of EIPM. However, for the second component of commitment to EIPM: OPL, the second hypothesis can rejected.

Conclusion

For the second hypothesis, the null hypothesis is partially rejected. In regard to the first component of commitment to EIPM, all the voice variables indirectly mediate the relationship between psychological safety and prioritisation of EIPM. The mediators in order of their strength these are: the total voice score, followed by promotive voice and finally prohibitive voice. In terms of the effect of the mediators on OPL, voice does not appear to show any significant mediation effects. Thus for the second hypothesis, the null hypothesis can rejected for component I of commitment to EIPM, and H1 can be accepted, indicating a positive significant relationship between psychological safety and prioritisation of EIPM, that is mediated by voice. But for the second component this does not hold up, and the null hypothesis still stands, indicating that there is no significant relationship between psychological safety and prioritisation of EIPM, that is mediated by voice.

Noticeably psychological safety is a statistically significant predictor for all voice variables, indicating an even stronger relationship then in comparison with the first hypothesis, suggesting that the effect of psychological safety is a positive statistical predictor of voice. In order of the effect of this relationship prohibitive voice is affected most, followed by the total voice score and finally promotive voice.

5. Conclusion

This study aims to bridge a gap in the academic literature on leadership in public administration by exploring the relationships among psychological safety, voice behaviour, and commitment to EIPM. The essence of this study is captured in the following research question:

How does the perception of psychological safety among top-level civil servants affect their level of commitment to evidence-informed policy making?

Initially, in this chapter these topics are approached individually; however, this research places particular emphasis on the mechanisms linking these topics, specifically in regard to the role that top-level civil servants have within their organisations. Thus during the section on the hypothesis the mechanisms linking these topics will be discussed.

The literature review highlights the important role that leadership has within the organisation in regard to prioritisation of EIPM, but did not provide sufficient insights into the current state of affairs for the research population (Cantarelli et al., 2023; Head, 2015; MacKillop & Downe, 2022; Shitrit et al., 2023; Torenvlied et al., 2022). This study shows that over 95% of the respondents at least 'partly agree' with the average of all statements combined that measure prioritisation of EIPM, and approximately 1-6% of respondents indicating they at least 'partly disagree' with evaluating the items separately. Thus, it can be concluded that the results from the analysis show that overall top-level civil servants prioritise EIPM in their work.

Furthermore in regard to OPL, although the concept of organizational learning has been around for decades, it has not yet been examined within the scope of this study (Argyris, 1977; Auqui-Caceres & Furlan, 2023). Although there is no exact criterion for defining a learning organisation, the fact that over 90% of respondents selected the answer option DLL suggests that the SCS exhibits characteristics of a learning organisation. Most notable in this study is a renewed insight into the behavioural component (i.e. the theory in use), where public (resource) management for communal benefit emerges as a new category. This may be attributable to the motivations characteristic of the public sector. Although this may also stem from the espoused theory as opposed to the theory in use, this difference between the theories in relationship to the research design will be further elaborated on in the discussion.

Overall, accounting for all of the above, the results of this study shows that top-level servants within the SCS are committed to EIPM.

The available literature also leaves questions unanswered regarding the current state of affairs for psychological safety for this research population, especially, this study distinguishes itself from other studies where leadership is not approached as an antecedent but as the subject of the study itself (Edmondson & Lei, 2014; Frazier et al, 2017; Hedlund & Osterberg, 2012; Liu, Hu, Li, Wang, & Lin, 2014; Newman et al., 2017). This study shows that approximately 87% at least 'partly agree' with all the average of all items that measure psychological safety. The item that stands out here is '*the feeling of freedom to take risks within the organisation*'. This aligns with other studies conducted within the Dutch government in the past two years, where this was also the statement with a relatively higher number of respondents indicating less agreement (Groeneveld & Janssen, 2023; ICTU, 2022). However, based on the results of the analysis, it can be concluded the individual perception of psychological safety within the SCS is negatively skewed, indicating higher scores for psychological safety among all categories.

Finally, the literature review showed that voice behaviour could be subdivided in both promotive and prohibitive voice, and that voice behaviour could be positively affected by psychological safety, and potentially be a mediator between the independent and dependent variable of this study (Ashford et al. 1998; Frazier et al., 2017; Miceli & Near 1992; as cited in Edmondson & Lei, 2014; Tsameti et al., 2023). Overall, the results of this study show that within the SCS, there is room for voice behaviour, with respondents at least 'agreeing' with most statements, and slightly favouring promotive voice over prohibitive voice.

Now that the concepts have been addressed individually, it is time to answer the research question based on the two hypothesis.

Hypothesis I

A commonly established link is that psychological safety has various positive effects, which can create the favourable conditions for beneficial organizational outcomes, such as enhanced information sharing mechanisms and the learning capacity of an organisation (Edmondson, 1999; Edmondson & Lei, 2014; Hedlund & Osterberg, 2012; Newman et al., 2017). The literature review provided some suggestions that there might be a link between psychological safety and commitment to EIPM; however, no previous studies have conclusively established this exact link.

The first hypothesis is in regard to the perception of psychological safety and its effect on commitment to EIPM is statistically shown to hold up for prioritisation of EIPM and one of the

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three subcomponents of OPL. As stated before, the two other components that comprise OPL are not statistically significant. This could be the case because there is no causal link between psychological safety and other components. Or due to the fact that the respondents overwhelmingly chose DLL, and OPL3 is a conditional question, limiting the variability needed to detect significant differences. Moreover, OPL2 was affected by a conceptual error as shall be elaborated on in the discussion.

Taking these findings and the above into consideration, it can be concluded that this study shows that there is a relationship whereby an increased perception of psychological safety has a positive influence on the commitment to EIPM, among top-level civil servants.

Hypothesis II

The literature review provided the most evidence that there would potentially be a link between psychological safety and voice behaviour, however there was not a lot of detailed information of which type of voice would be most common and would have the strongest link as a mediator between the independent and dependent variable within the context of this study (Ashford et al. 1998; Frazier et al., 2017; Miceli & Near 1992; as cited in Edmondson & Lei, 2014; Edmondson & Lei, 2014; Liang et al., 2012; Tsameti et al., 2023). Moreover, in the context of psychological safety being an antecedent for voice behaviour, these same question would remain unanswered (Ashford et al. 1998; Miceli & Near 1992; as cited in Edmondson & Lei, 2014; Edmondson & Lei, 2014; Liang et al., 2012; Tsameti et al., 2023).

As for the second hypothesis, it is partially accepted, this means that all forms of voice act as partial mediators in the relationship between psychological safety and prioritisation of EIPM. Where the total voice score appears to have the strongest relationship, and the role of promotive voice is the strongest as opposed to prohibitive voice. With respect to the second component of EIPM voice does not appears to be a mediator between psychological safety and OPL.

However where the mediation analysis may not completely prove the second hypothesis, the results of the analysis show a strong and significant relationship of psychological safety as an antecedent for voice behaviour. In this relationship, prohibitive voice has the strongest effect, which aligns with the fact that psychological safety provides people the freedom to speak up, especially at times when doing so might even jeopardize the organization or personal relationships with colleagues. Which is in line with the findings of Liang et al. (2012) where psychological safety also was a stronger predictor for prohibitive voice.

6. Discussion

In this chapter, the limitations of this research will be addressed, along with possible avenues for future research. We will begin with a general overview of the study as a whole, followed by a detailed discussion of the specific concepts explored in this research.

General overview

Firstly, this research represents a snapshot in time, as it is a cross-sectional survey. Whereby measuring these concepts over time could provide interesting insights, especially if it can be used in a study to trace the effects of certain measures within departments or teams that influence the concepts and the relationship between them discussed in this research. Nonetheless, this study allows for a comparison of the current state regarding the concepts discussed in this research, and potential follow-up studies can use the data to compare results. Furthermore, the findings of this study can be compared to the findings on psychological safety as seen in ICTU (2022) and Groeneveld & Janssen (2023), provided that differences in scope are taken into account.

Additionally, the use of Likert scales yields ordinal data, meaning that the distances between the scale points are not equally distributed (Sullivan & Artino Jr, 2013). This must be taken into account when interpreting the data in the analysis and the subsequent conclusions. Additionally, data that is not normally distributed and the associated non-parametric tests, as used in this research, often produce less 'strong data' as compared to data that is normally distributed and where parametric tests are used (Sullivan & Artino Jr, 2013). Future survey studies could address this by collecting data at multiple measurement levels or by opting for a different research design altogether.

Regarding the generalisability of the results, it has been frequently noted during this study that the sample is not perfectly representative of the SCS population. Therefore, it is important to interpret the results with some nuance. This discrepancy may be due to the data collection method. Although an effort was made to distribute the survey as widely as possible, and everyone within the SCS had the opportunity to participate through the monthly newsletter, this did not lead to the desired response rate. Due to considerations outlined in the methods on data collection, the decision was ultimately made to send personal emails, which may have led to an overrepresentation of TMG and other top-level civil servants, as they were relatively easy to trace back to the SCS. Future studies might address this by finding a more suitable data

collection method, which may result in a better overall representation of the distribution of the paygrades. However, given the time constraints and other factors, this was not feasible for this study.

Specific concepts

First, a remark on the effects of leadership, followed by a critical note on commitment to EIPM. In the second part, particularly regarding the component OPL, two points need to be addressed: the conceptualisation and operationalisation of OPL and a general critique on the use of surveys to study this concept.

In this study, it has been frequently mentioned that leadership can have a proven positive effect on organisational outcomes. However, in light of the research design, it is important to reference to the findings of the study by Jacobsen & Andersen (2015): The authors argue that 'perceived' leadership behaviour has a stronger effect on organisational outcomes, than leaders 'intentions' and 'actual' behaviour. Since this study conducted a survey among leaders, we are not measuring how their leadership is perceived. However now that these hypotheses are (partially) accepted, this may provide a basis for further research focused on the link between intentions and perceived leadership behaviour, given the discussed concepts.

Regarding the conceptualization and operationalisation of OPL, there are no pre-validated surveys available for this concept within this context. Although thoroughly searching for similar studies and carefully examining the 'supporting information' of the study by Auqui-Caceres & Furlan (2023), none of the surveys that were found were suitable for the scope of this research. Therefore, the decision was made design a questionnaire for OPL for this study. Multiple sources were used in an attempt to conceptualize an appropriate definition. However, a conceptual error occurred in defining SLL (variable OPL2). Instead of *'The adjustment of existing indicators to better align with the existing goals*,' it would have been more accurate to state, '*The adjustment of policy instruments to better align with the existing goals*.' This error may also explain some of the low variability in the answers, and subsequently had implications throughout this study. This may also be the reason that this part of the survey received some criticism from respondents (N<8), both personally and via email. All of the above negatively impacts the validity of this question and, consequently, the OPL component as a whole. Future survey studies could potentially use this questionnaire as a template and improve upon it by addressing these shortcomings. This includes, but is not limited to, improving the questions

through sample testing, using different levels of measurement, or opting for a completely different research design, as will be further explained in the next paragraph.

According to Auqui-Caceres & Furlan (2023), about 43% of the studies included in their systemic review used a survey to gauge the level of organizational learning. However, one critique of survey research remains: individuals are likely to provide answers based on their espoused theory, and observational research would be more desirable, but this was not feasible within the available means and limited time-frame for this study (Auqui-Caceres & Furlan, 2023). An attempt was made to better capture this concept by using different levels of measurement. However, as previously mentioned, despite these efforts, the expected result were not achieved. Furthermore, as the answers from the survey are based on self-reported data, it is subject to potential biases and should be interpreted with some caution. Future studies could address these shortcomings by opting for a research design that allows for observation as opposed to a survey design.

7. Policy recommendations

Considering the results presented in the conclusion, and the limitations of this study and avenues for future research as outlined in the discussion, several broad policy recommendations are now provided.

Regarding psychological safety, as previously mentioned in the conclusion, the current state for the SCS at this point in time is generally positive, with a high level of agreement on almost all statements. A nuance however would be that a relatively large proportion of respondents (40.5%) currently choose the option 'partly agree' based on the average score, and approximately one in ten respondents to at least 'Don't disagree/don't agree'— towards greater levels of disagreement. Therefore, considering the generalisability and limitations of this research, there is still potential for improvement for over 50% of the SCS towards achieving at least 'agree' based on the average scores.

I. Therefore, it is recommended to continue with the current programs aimed at leadership in relationship with psychological safety, with the understanding that leaders are not only approached as antecedents for creating psychological safety but also as central figures themselves. As demonstrated in this study, their perception of psychological safety has positive effects within the organisation. An increased perception of psychological safety can stimulate voice behaviour and contribute to an increased commitment to EIPM, which in turn can have positive impacts in various ways on the organisation as a whole.

II. Moreover, further research should be conducted on item Ps6 of psychological safety (taking risks), as this is the item where the most improvement can be made. While one study might be a snapshot in time, the findings of this study are aligned with multiple studies over the years for the Dutch (central) government, showing that this item has the greatest potential for improvement (Groeneveld & Janssen, 2023; ICTU, 2022). This topic could be explored more deeply through further research, not only focusing on the SCS but across the entire government. Such research could examine, among other aspects, the desirability of taking risks within bureaucracy and potential facilitators and barriers for taking risk. Greater agreement on this item could raise the overall score for psychological safety and, in turn, enhance the positive effects associated with it.

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Appendix

A. Survey as distributed to the respondents

A.0 Informed consent (landing page)

Welkom bij de enquête, en bedankt dat u de tijd neemt om hieraan deel te nemen.

Het doel van het onderzoek is om inzicht te krijgen in de mening van de ABD'ers over twee thema's die hoog op de agenda staan van de Rijksoverheid: Sociale veiligheid en evidence-informed policy making (EIPM).

De gegevens zullen niet worden herleid tot individuele antwoorden. Er wordt zorgvuldig omgegaan met de ingezamelde gegevens, en deze worden niet langer bewaard dan noodzakelijk, met een maximum van 5 jaar. Bovendien is deelname aan dit onderzoek vrijwillig; u kunt te allen tijde besluiten om te stoppen met uw deelname.

De enquête bestaat uit 4 onderdelen en deelname aan het onderzoek duurt maximaal 5 minuten.

Door deel te nemen aan dit onderzoek stemt u vrijwillig in met de voorwaarden zoals hierboven beschreven. Als u akkoord gaat, klik dan op het pijltje rechtsonder om door te gaan naar de enquête. Als u niet akkoord gaat, kunt u dit venster sluiten.

Als u vragen of opmerkingen heeft over het onderzoek kunt u contact opnemen met:
Thomas Augustinus (t.augustinus@umail.leidenuniv.nl)

NB Dit onderzoek is in het kader van mijn afstuderen aan de Universiteit Leiden en niet in opdracht van de ABD.

A.1 Psychologische veiligheid

In dit onderdeel vragen wij naar uw perceptie van de ervaren psychologische veiligheid binnen uw organisatie. Het gaat hier specifiek om de perceptie die u ervaart in uw directe werkomgeving (naar collega's op gelijk niveau of boven u).

Kunt u aangeven in hoeverre u het eens bent met de volgende stellingen:

	Volledig mee oneens	Mee oneens	Deels mee oneens	Niet mee eens / Niet mee oneens	Deels mee eens	Mee eens	Volledig mee eens
In mijn organisatie kan je lastige kwesties naar voren brengen	○	○	○	○	○	○	○
In mijn organisatie is het gemakkelijk om anderen om hulp te vragen	○	○	○	○	○	○	○
In mijn organisatie is het niet erg om een fout te maken	○	○	○	○	○	○	○
In mijn organisatie wordt ieders talent gewaardeerd	○	○	○	○	○	○	○
In mijn organisatie accepteren mensen elkaar als ze anders zijn	○	○	○	○	○	○	○
In mijn organisatie is het veilig om risico's te nemen	○	○	○	○	○	○	○
In mijn organisatie worden collega's niet opzettelijk gedwarsboomd	○	○	○	○	○	○	○

A.2 Voice

In dit onderdeel vragen wij naar in hoeverre u zich uitspreekt binnen uw organisatie. Het gaat hier wederom om uw directe werkomgeving (naar collega's op gelijk niveau of boven u).

Kunt u aangeven in hoeverre u het eens bent met de volgende stellingen:

	Volledig mee oneens	Mee oneens	Deels mee oneens	Niet mee eens / Niet mee oneens	Deels mee eens	Mee eens	Volledig mee eens
Ik kom met suggesties om de werkprocessen van de organisatie te verbeteren	○	○	○	○	○	○	○
Ik kom met constructieve suggesties die de organisatie helpen haar doelen te bereiken	○	○	○	○	○	○	○
Ik spreek me eerlijk uit over problemen die schade aan de organisatie kunnen veroorzaken, zelfs wanneer hierover afwijkende meningen bestaan	○	○	○	○	○	○	○
Ik durf te wijzen op problemen wanneer deze zich aandienen binnen de organisatie, zelfs als dat de relaties met andere collega's zou belemmeren	○	○	○	○	○	○	○

Dit onderdeel gaat om uw houding ten opzichte van EIPM. Hierbij hanteren wij de brede definitie van EIPM, waarbij er naast academisch evidence ook meerdere vormen van evidence mogelijk zijn zowel interne (bijvoorbeeld beleidsdocumenten) als externe informatiebronnen (bijvoorbeeld vanuit de planbureaus, rijksinstellingen of consultancybureaus). Dit is het op één na laatste onderdeel, hierna volgt alleen nog maar het invullen van de achtergrondgegevens.

A.3a EIPM - 1

Kunt u aangeven in hoeverre u het eens bent met de volgende stellingen:

	Volledig mee oneens	Mee oneens	Deels mee oneens	Niet mee eens / Niet mee oneens	Deels mee eens	Mee eens	Volledig mee eens
Ik hecht waarde aan onderbouwde resultaten	○	○	○	○	○	○	○
Ik laat de programma's en activiteiten waarvoor ik verantwoordelijk ben evalueren op regelmatige basis	○	○	○	○	○	○	○
Voor de meeste zaken gebruik ik steeds de best mogelijke informatie, data en kennis	○	○	○	○	○	○	○

A.3b EIPM - 2

Bij dit onderdeel gaat het om hoe u omgaat met nieuwe informatie die aan het licht komt. Dit betreft specifiek situaties waarin er een mismatch is tussen de intenties (vastgestelde doelen) en de uitkomsten van het huidige beleid.

We stellen hier een aantal vragen die op elkaar voortbouwen.

NB: De termen "discrepantie" en "mismatch" betekenen in deze context hetzelfde en worden afwisselend gebruikt.

Q. In hoeverre bent u het eens met de volgende stelling:

	Volledig mee oneens	Mee oneens	Deels mee oneens	Niet mee eens / Niet mee oneens	Deels mee eens	Mee eens	Volledig mee eens
Wanneer er een discrepantie tussen de intenties en de uitkomsten wordt waargenomen, doe ik een poging deze mismatch te corrigeren	○	○	○	○	○	○	○

In het verlengde van de vorige vraag:

Q. Kunt u een voorbeeld geven vanuit uw rol als ABD'er van een situatie waarin u een mismatch heeft geprobeerd te corrigeren? Wat heeft u gedaan om deze mismatch te herstellen? Kies een voorbeeld dat volgens u het beste aansluit bij uw gebruikelijke manier van handelen.

Q. In het geval van een mismatch, bent ik eerder geneigd tot:

○ Het aanpassen van de bestaande indicatoren om ze beter te laten aansluiten op de bestaande doelen

○ Het evalueren en mogelijk wijzigen van de kernveronderstellingen en doelstellingen zelf

Q. Als vervolg op de vorige vraag: wat komt het dichtste in de buurt van uw beweegredenen?

○ Het voorkomen van verlegenheid, dreigingen, of het gevoel van kwetsbaarheid of incompetentie

○ Het gebruiken van de juiste informatie

○ Anders, namelijk

[   ]

A.4 Achtergrondkenmerken

Als laatste vragen we u wat achtergrondgegevens, zodat we kunnen nagaan in hoeverre het onderzoek representatief is. We zullen alleen op het niveau van de antwoorden uitspraken doen; de individuele resultaten zullen niet herleidbaar zijn. Het invullen van deze gegevens is niet verplicht.

Q. Wat is u gender?

○ Man

○ Vrouw

○ Anders, namelijk

[   ]

○ Ik wil geen antwoord geven

Q. Binnen welk profiel van de ABD bent u werkzaam?

○ ABD-managers (schaal 15: afdelingshoofden, projectmanagers, programmamanagers etc)

○ ABD-topmanagers (schaal 16-18: directeuren, programmadirecteuren, projectdirecteuren etc)

○ Topmanagementgroep (o.a. (plv.) secretarissen-generaal, directeuren-generaal etc)

Q. Binnen welk domein bent u werkzaam?

○ Beleid

○ Uitvoering

○ Inspectie

○ Bedrijfsvoering

○ Anders, namelijk

B. Survey in English, with coded variables

B.0 Informed consent (landing page)

Welcome to the survey, and thank you for taking the time to participate.

The purpose of this research is to gain insight into the opinions of SCS members on two topics that are high on the agenda of the Dutch central government: psychological safety (as part of social safety) and evidence-informed policy making (EIPM).

The data will not be traced back to individual responses. The collected data will be handled with care and will not be retained longer than necessary, with a maximum of 5 years. Additionally, participation in this research is voluntary; you may choose to discontinue your participation at any time.

The survey consists of 4 sections, and participation in the research will take approximately 5 to 10 minutes.

By participating in this research, you voluntarily agree to the terms as described above. If you agree, please click on the arrow at the bottom right to proceed to the survey. If you do not agree, you may close this window.

If you have any questions or concerns about the research, please contact:

Thomas Augustinus (t.augustinus@umail.leidenuniv.nl)

Important Notice: This research is conducted as part of my graduation research from Leiden University and is not commissioned by the SCS.

B.1 Psychological safety

In this section, we inquire about your perception of the experienced psychological safety within your organization. Specifically, we are interested in the perception you experience in your direct work environment (towards colleagues at the same level or above you).

Could you indicate to what extent you agree with the following statements:

Variable	Statement
Ps1	In my organization, you can raise difficult issues
Ps2	In my organization, it is safe to take risks
Ps3	In my organization, people accept each other when they are different
Ps4	In my organization, everyone's talent is appreciated
Ps5	In my organization, it is okay to make a mistake
Ps6	In my organization, it is easy to ask others for help
Ps7	In my organization, colleagues are not deliberately hindered by others
PsT	The average score of Ps1-Ps7

Answer options	7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree)
Level of measurement	Ordinal
Level of analysis	Individual

<u>B.2 Voice</u>

In this section, we inquire about the extent to which you express yourself within your organization. Once again, we are interested in your direct work environment (towards colleagues at the same level or above you).

Could you indicate to what extent you agree with the following statements:

Variable		Statement
Promotive voice items	Va1	I come up with suggestions to improve the organization's work processes
	Va2	I provide constructive suggestions that help the organization achieve its goals
Promotive voice total	VAT	Average Va1-Va2
Prohibitive voice items	Vb1	I speak honestly about issues that may harm the organization, even when there are differing opinions
	Vb2	I dare to point out problems when they arise within the organization, even if it may hinder relationships with other colleagues
Prohibitive voice total	VBT	Average Vb1-Vb2
Voice Total	VT	Average Va1-Vb2

Answer options	7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree)
Level of measurement	Ordinal
Level of analysis	Individual

B.3 Commitment to EIPM

This section pertains to your attitude towards EIPM. Here, we adopt a broad definition of EIPM, encompassing not only academic evidence but also various forms of evidence, including both internal (such as policy documents) and external information sources (such as those from planning agencies, governmental bodies, or consultancy firms). This is the second-to-last section; after this, only the completion of background information is required.

B.3a Prioritisation of EIPM

This section focuses on how you handle new information that comes to light, specifically situations where there is a mismatch between intentions (established goals) and the outcomes of current policy.

We present a series of questions that build on each other.

NB: The terms "discrepancy" and "mismatch" mean the same in this context and are used interchangeably.

To what extent do you agree with the following statements:

Variable	Statement
P1	I value evidenced results
P2	I regularly evaluate the programs and activities for which I am responsible
P3	I consistently use the best available information, data, and knowledge for most matters
PT	Average score P1-P3

Answer options	7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree)
Level of measurement	Ordinal
Level of analysis	Individual

B.3b Organisational policy learning

This section focuses on how you handle new information that comes to light, specifically situations where there is a mismatch between intentions (established goals) and the outcomes of current policy.

We present a series of questions that build on each other.

NB: The terms "discrepancy" and "mismatch" mean the same in this context and are used interchangeably.

To what extent do you agree with the following statement:

Variable	Statement
OPL1	When a discrepancy between intentions and outcomes is observed, I attempt to correct this mismatch

Answer options	7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree)
Level of measurement	Ordinal
Level of analysis	Individual

Variable	Question
OPLcheck	Building upon the previous question: Could you provide an example from your role as an SCS member of a situation where you attempted to correct a mismatch? What did you do to rectify this mismatch? Please choose an example that you believe best aligns with your typical approach.

Answer options	Open ended question, which can be coded backwards into either SLL or DLL behaviour.

Level of measurement	Nominal
Level of analysis	Individual

Variable	Question
OPL2	In the case of a mismatch, I am more inclined to:

Answer options	- 1 = The adjustment of existing indicators to better align with the existing goals. (this would constitute SLL) - 2 = The evaluation and potential modification of the core assumptions and objectives themselves. (this would constitute DLL) - Other, in that case the variable OPLo is created,
Level of measurement	Nominal
Level of analysis	Individual

Conditional on the outcome of OPL2, if the respondent chooses DLL, a new question will come up in a new page:

Variable	Question
OPL3	Following up on the previous question: what comes closest to your motivations?

Answer options	1. The avoidance of embarrassment, threats, or feelings of vulnerability or incompetence (Model I) 2. Correctly using the evidence (Model II) 3. Other, in which case a new variable OPL3o will be created Open ended question, which can be coded backwards into either Model I or Model II.
Level of measurement	Nominal
Level of analysis	Individual

B.4 Background information

As a final step, we ask for some background information so that we can assess the representativeness of the study. We will only make statements at the level of the answers; individual results will not be traceable. Providing this information is optional.

Variable	Question
Gender	What is your gender?

Answer options	- Male - Female - Otherwise (open ended) - I prefer not to say
Level of measurement	Nominal
Level of analysis	Individual

Variable	Question
Profile	In which profile of the SCS are you employed?

Answer options	- SCS-managers (paygrade 15) - SCS-topmanagers (paygrade 16-18) - Topmanagementgroup (paygrade 19)
Level of measurement	Nominal
Level of analysis	Individual

Variable	Question
Domain	In which domain are you employed?

Answer options	- Policy - Execution - Inspection - Business operations - Other (open-ended)
Level of measurement	Nominal
Level of analysis	Individual

C. Descriptive statistics

C.1 Background characteristics

Gender		Observed		Actual		
		Frequency	Percentage	Percentage		
	Male	69	55,65%	57%		
	Female	50	40,32%	43%		
	Prefer not to say	5	4,03%			
	Total	124	100,00%	100%		

Profile		Observed		Actual		
		Frequency	Percentage	Frequency	Percentage	Observed / Actual
	ABD-managers (paygrade 15)	29	23,39%	1109	56,41%	2,61%
	ABD-topmanagers (paygrade 16-18)	75	60,48%	658	33,47%	11,40%
	Topmanagementgroup (paygrade 19)	20	16,13%	109	5,54%	18,35%
	Total	124	100,00%	1966	6,31%	6,31%

Domain		Frequency	Percentage
	Policy	47	37,90%
	Execution	31	25,00%
	Inspection	13	10,48%
	Business operations	17	13,71%
	Other	16	12,90%
		124	100,00%

C.2 Psychological safety

	Strongly disagree	Disagree	Partly disagree	Don't disagree/ don't agree	Partly agree	Agree	Strongly agree	Mean	St Dev	Variance	Skewness	Kurtosis
Ps1	0,83	4,13	3,31	1,65	16,53	50,41	23,14	5,7	1,3	1,6	-1,7	6,1
Ps2	0	1,65	3,31	2,48	19,83	49,59	23,14	5,8	1	1,1	-1,4	5,7
Ps3	0	4,13	6,61	11,57	31,4	34,71	11,57	5,2	1,2	1,5	-0,8	3,3
Ps4	0	1,65	5,79	10,74	34,71	37,19	9,92	5,3	1,1	1,2	-0,7	3,5
Ps5	0	4,13	4,13	4,96	31,4	42,15	13,22	5,4	1,1	1,4	-1,2	4,5
Ps6	0	8,26	13,22	14,88	34,17	23,14	5,79	4,7	1,3	1,8	-0,4	2,4
Ps7	0,83	3,31	2,48	8,26	17,36	43,8	23,97	5,6	1,3	1,6	-1,4	5
PsT(A)	0	0,83	3,31	8,26	40,5	38,84	8,26	5,4	0,9	0,7	-0,8	4,1

C.3 Voice

	Strongly disagree	Disagree	Partly disagree	Don't disagree/ don't agree	Partly agree	Agree	Strongly agree	Mean	St Dev	Variance	Skewness	Kurtosis
Va1	0	0,83	1,65	3,31	8,26	58,68	27,27	6	0,9	0,7	-1,7	7,7
Va2	0	0,83	0,83	1,65	8,26	55,37	33,06	6,2	0,8	0,7	-1,8	9,1
Vb1	0	0,83	2,48	1,65	14,05	51,24	29,75	6	0,9	0,9	-1,5	6,6
Vb2	0	0,83	2,48	3,31	18,18	52,89	22,31	5,9	0,9	0,8	-1,3	5,7
VAT	0	0,83	0,83	2,48	4,96	52,89	38,02	6,2	0,8	0,7	-1,9	9,3
VBT	0	0	2,48	2,48	9,92	55,37	29,75	6,1	0,8	0,7	-1,4	5,9
VT	0	0,83	0,83	2,48	7,44	57,85	30,58	6	0,8	0,6	-1,8	8,7

C.4 Commitment to EIPM

	Strongly disagree	Disagree	Partly disagree	Don't disagree/ don't agree	Partly agree	Agree	Strongly agree	Mean	St Dev	Variance	Skewness	Kurtosis
PT(A)	0	0,83	0	4,13	17,36	61,98	15,7	5,9	0,8	0,6	-1,6	8,6
P1	0	0,83	0	1,65	4,96	46,28	46,28	6,3	0,8	0,6	-2	10,6
P2	0	4,96	1,65	4,96	38,34	33,06	16,53	5,4	1,2	1,4	-1,1	4,6
P3	0,83	0,83	2,48	6,61	15,7	50,41	23,14	5,8	1,1	1,2	-1,5	6,4
OPL1	2,48	4,96	1,65	14,05	11,57	53,72	11,57	5,3	1,4	1,9	-1,4	4,6
	SLL	DLL										
OPL2	9,92	90,08										
	Model-I	Model-II	Other									
OPL3	10,09	58,72	31,19									