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Strategic Management and Performance Management in Government Agencies

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Preface

Strategic management and performance management are steering tools which are widely used in the public sector. The two perspectives are often studied separately, but in this thesis, we try to gain some understanding of how they interact.

Studying execute master program in Public Administration at Oslo Metropolitan University has been a joy and a privilege. I want to thank the Faculty of Social Sciences for granting me a student scholarship for the thesis proposal. It enabled me to participate in the inspiring conference European Group for Public Administration in 2018. It also allowed me to participate in a research group, which gave me valuable feedback early in my project.

I owe thanks to those who have contributed with critical questions and suggestions, including director Roger Bjerke at the Agency for Public Management and eGovernment (DIFI) for giving me valuable input in early stages of the project.

I especially owe thanks to my supervisor Åge Johnsen for continuous support and challenging encouragement.

Sammendrag

Denne masteroppgaven er en utforskende studie av bruk av strategisk styring og mål- og resultatstyring i sentral-administrative statlige virksomheter i Norge. Jeg brukte dokumentanalyse av tre dokumentkilder: tildelingsbrev, virksomhetenes strategidokumenter og virksomhetens årsmeldinger.

Jeg studerte hele populasjonen av 61 sentraladministrative enheter, deriblant direktorater og tilsyn. Disse virksomhetene er autonome enheter, men er underlagt ytre styring gjennom tildelingsbrevenes mål- og resultatstyring og budsjettstyring. Strategisk styring og mål- og resultatstyring er derfor i disse virksomhetene strukturelt løsrevet fra hverandre.

Nøkkelspørsmål har vært hvordan mål- og resultatstyringen og den strategiske styringen interagerer, hvorfor noen statlige virksomheter utvikler strategier og hvordan styrken og detaljorienteringen i tildelingsbrev påvirker utviklingen og bruken av strategier.

Jeg innhentet både kvantitative og kvalitative data fra våre kilder. Ved hjelp av det strategiske rammeverket til Poister et al. (2010) tolket jeg bruk av tildelingsbrev som kontekstuelle determinanter som beskrevet av Ferlie og Ongaro (2015). Tildelingsbrev ble analysert med henblikk på kvantitativ måling av ulike styringsvirkemidler. Strategier ble analysert fra flere perspektiver, bl.a. strategisk ståsted (Boyne and Walker 2004) og verdier og visjoner (Bozeman 2007, Hood 1991). De kvantitative dataene ble analysert med Partial Least Squares Structural Equation Modelling (PLS-SEM) (Hair et al. 2017).

Nøkkelfunn: I statlige virksomheter på sentral-administativt nivå hadde 41 av 61 virksomheter utviklet strategier. Et stort flertall (78%) refererte til sin strategi i sine årsrapporter, men kun et mindretall (37%) refererte til konkrete strategiske mål. Dette bidrar til et bilde av at strategier hos mange ikke er sovende dokumenter. Strategier ser ut til å ha en mer identitets-markerende funksjon i styringen av virksomheter, mens mål- og resultatstyringen i tildelingsbrev dominerer den kortsiktige målsettingsfunksjonen. Når strategier blir for detaljerte i sine mål, ser det ut til at de raskere blir irrellevante for virksomheten. Avhengig av variabler som virksomhetens størrelse, organisasjonsstruktur, politikkområde og tilhørighet til departement, viste virksomhetene store variasjoner i strategisk styring og mål- og resultatstyring. Dette tolkes i denne oppgaven som at mål- og resultatstyring og strategisk styring synes å brukes som separate, men likevel sammenvevde redskaper i styringen av statlige virksomheter i Norge.

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Abstract

This thesis is based on explorative empirical research on the use of strategic management and performance management in central-administrative governmental agencies in Norway. Employing document analysis, the whole population of 61 central administrative agencies in Norway (the year 2017) – including directorates, inspectorates and oversight bodies, was examined. These are organizationally independent units but are exposed to politically based ministerial governance, including performance budgeting and performance management. Strategic management and performance management are therefore not inherently integrated processes in Norwegian government agencies.

Key questions were how performance management interacts with strategic management in governmental agencies, do ministries' various use of performance management affect whether agencies develop strategies or how they design their strategy, and are (long term) strategies dormant documents or actively used as steering instruments in agencies alongside (short term) performance management?

Both quantitative and qualitative data were gathered from our source documents. Poister et al.'s (2010) strategic management framework was used as an integrative perspective. The relationship between agency and parent ministry was interpreted as defining important contextual determinants described by Ferlie and Ongaro (2015). Strategies were analysed with various approaches such as strategic stance (Boyne and Walker 2004) and institutional "administrative values" and vision (Bozeman 2007, Hood 1991). The quantitative data were analysed with Partial Least Squares Structural Equation Modelling (PLS-SEM) (Hair et al. 2017).

Key findings: In a supposedly low-NPM affected tier of government, two-thirds of agencies had agency-wide strategies. Strategic management seems to have a stronger identity forming function, while performance management dominates aim-setting in agencies. Depending on variables like size, organisation structure, policy area and ministry-affiliation, the interaction between performance management and strategic management showed non-linear variations suggesting they function as separate, but interconnected steering-instruments in government agencies in Norway.

Keywords: strategy, strategic management, public sector, performance management, environment, context, government agency, new public management

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Index

FIGURES AND TABLES

1 Introduction

Many Norwegian government agencies develop and use strategies. They face complex challenges, and their resources are limited. Tough choices and priorities need to be made to fulfil political-societal expectations. In studying how such organisations use strategic management, one needs, therefore, to take into consideration the particular contexts in which these organisations exist.

Government agencies are public organisations established to deliver public services for parts of society. Many of the agencies in our study also impose what Moore (1995) calls obligations on behalf of the state. They exercise a level of professional autonomy, and we understand strategic processes as an expression of such autonomy. Simultaneously, ministries govern these agencies through letters of allocation[1], containing performance management and setting priorities with strategic and budgetary implications. These internal and external lines of governance with strategic implications need to be untangled to understand how performance management and strategic management are employed in government agencies and how they interact. The Graver-report expresses this complexity thus: "The role of directorates are twofold: they exercise authority and simultaneously advise ministries. They are politically run through policy, but they are not political. They primarily attend to professional discretion in their execution of service, but they need a political understanding" (NOU 2006:14, 65).

Annual letters of allocation are used by ministries as an instrument to exercise political, administrative, economical and in some respect strategic control and thereby influence the strategic space of agencies. Such letters, therefore, are an expression of the 'politico-administrative context' (Ferlie and Ongaro 2015, 121ff) which needs to be analysed to understand how context, primarily ministerial performance management, influence strategic management.

The Norwegian government has since the early 1990s used performance-based management. Christensen et al. (2015) describe a democratic ideal as a basis of this form of management where politicians are elected based on the population's wishes and needs, and further establish performance-targets for public organisations, who in turn deliver services to the society based on this policy and report back to the political-administrative authority on their accomplishments. Heidelberg sees the broader issue of public administration in a radically different light, arguing that public administration is best understood as a "political project to

[1] This is the most used English translation of the Norwegian term "tildelingsbrev". Sweden uses the English term "letter of appropriation" for the same kind of document.

resolve the problem of popular sovereignty" (Heidelberg 2019, 692). The latter perspective gives a better take on the fact that the interaction between the ministry and government agencies happen with a much higher degree of complexity than the simplified democratic steering model. Policies, goals and specific performance-targets are often developed bottom-up (i.e. initiated by the agency, not the ministry) in the bureaucracy instead of top-down from the political-administrative level. The consequence of this is that performance-targets are "much more technical than the democratic ideal dictates," according to Christensen (2015, 111). Other studies also attribute interest groups, media and chance events as contributing to formulating policies for societal needs as a basis for performance management (Dooren, Bouckaert, and Halligan 2015). These different lines of thought, therefore, sets our exploration of the intersection between performance management and strategic management into the wider discourse of the Administrative State (Waldo 2006). From a strategic management perspective questions concerning autonomy and strategic space are immediately relevant. The intersection of performance management and strategic management, therefore, is complex and partly shrouded in unaccessible processes between agency and ministry. With a harmonious metaphore Dusenbury aptly describes the relationship between strategic planning and performance measurement as "...a circle – a continuous process of governing-for-results" (Dusenbury 2000, 2). An important question is whether this harmony is real.

1.1 Positioning

There have been some recent studies on strategic management and performance management in higher governmental agencies, but we have found none with our broad perspective. Ongaro and Ferlie (2019) studied to agencies in the EU administration and found use of strategy processes in non-new public management public service settings. The de-linking of strategic management from NPM context is relevant in our study since we study agencies with strong traditions of neo-Weberian State (Pollitt and Bouckaert 2004, Sørensen and Thomsen 2018). Carrigan (2018) examined a broad set of U.S. federal agencies looking for effects of competing mandates on agency performance, This is relevant in our context, as (internal) strategic management, and (external) performance management can constitute competing mandates. Elbanna, Andrews, and Pollanen (2015) studied how strategic planning determines the success of strategy implementation in public service organisations in a wide variety of governmental agencies including some federal agencies in Canada. There has also recently been several master theses covering performance management in letters of allocation, strategic management and agencies' annual reports. Butt and Simonsen (2013) examined the use of strategy in the

public sector in their master thesis. Using a qualitative design, they employed interviews in six public organisations from different levels of the administrative hierarchy. Three of the agencies were government agencies, as in our study. Sørheim and Tollefsen (2012) examined the use of steering aims over time in letters of allocation, and finally, Espe (2018) examined the use of annual reports in government agencies. Kjærvik and Askim (2015) did a wide-reaching longitudinal study of the development of steering-demands in letters of assignment in governmental agencies. The possibly unique contribution of this thesis is combining a study of both performance management and strategic management in a population-wide study of government agencies at the central administrative level.

1.2 Research-question:

How does performance management interact with strategic management in government agencies?

This central question raises several related questions, as why do some agencies develop strategies, while others do not? How do the amount and detail-orientedness of performance management affect the use of strategic management?

The unit of analysis in this study is government agencies, and the population is all central administrative agencies in Norway, among them directorates, agencies and inspectorates, who all report directly (not through any other body) to their respective ministry (NSD 2018).

1.3 Overview over the rest of the thesis

In chapter 2, we discuss theory and previous research on performance management and strategic management in government agencies. The discourse on contextual understanding of strategic management is especially relevant. We then develop a conceptual model and hypotheses on the relationships between the main variables in our study. In chapter 3, we elaborate on methodical considerations, questions of sampling, data gathering and provide a closer specification of variables, including operationalisation and coding schemes. We also discuss questions related to validity and reliability. In addition to general methodical perspectives, we also address the benefits and challenges in using Partial Least Squares Structural Equation Modelling (PLS-SEM) in this context. Chapter 4 is a presentation of results. In chapter 5 we discuss the main findings, and in chapter 6, we draw some tentative conclusions and point out what seems to be a need for further research.

2 Theory and previous research

"It is the theory that decides what we can observe." — Albert Einstein

In this chapter, we examine the most relevant theory and previous research which can enlighten our research-question. First, we identify some critical elements in definitions of strategy and strategic management. Then we examine a relevant framework for strategic management by Poister, Pitts, and Hamilton Edwards (2010). That leads us to further investigate theoretical perspectives on the impact of strategic context, utilising aspects of Ferlie and Ongaro's approach (Ferlie and Ongaro 2015). On the topic of performance management, we draw on definitions and theory by Dooren, Bouckaert and Halligan (2015). We then conclude this chapter with a conceptual model, accompanied by relevant hypotheses.

2.1 Strategic management as public administration

Research on strategic management in the public sector is closely connected to the broader area of research on public administration, which can be studied from several viewpoints. From a political science perspective, democratic legitimacy is one of several relevant questions when discussing public organisations' strategic autonomy. Strategic planning might give the society and polity necessary transparency into central decision-making processes in the organisations. On the other hand, strategic agency autonomy limits political interference. Other relevant questions could be how contexts such as (neo-) Weberian public bureaucracy, New Public Management-reforms and the developing New Public Governance-practice (Ongaro and Ferlie 2019) affect the use of performance management and strategic management in government agencies.

One could also take a more intra-organisation perspective and study how organisations do strategy as practice (Jarzabkowski 2005), from a resource-based view of the organisation (Barney and Clark 2007) or utilising any of Mintzberg et al.'s (2009) 10 strategic schools of thought.

In collecting data, we limit our perspectives to certain variables linked to performance management and strategic management, thereby excluding many of the perspectives mentioned above. However, in discussing our findings, we broaden our perspective and interpret our data from a broader range of theoretical perspectives.

2.2 Discussion of definitions

2.2.1 Government agencies

Government agencies cover a wide array of public organisations, with different degrees of publicness (Bozeman 1987). They all have been "set up under government sponsorship to carry out a particular purpose" (Rolland 2010, 181). They deliver services to the population (Andrews et al. 2012) and impose obligators on behalf of the state (Moore 1995). In this thesis, we focus on central-administrative government agencies, all being directly subjected to government ministries in Norway.

2.2.2 Performance management

Performance management comes in a wide variety and is documented as being a practice long before the term was employed academically. For instance, Rubin and Willoughby (2014) detail the development of various forms of performance budgeting and performance management from the beginning of the 20th century. Here, we settle with a functional definition:

"Performance management is a type of management that incorporates and uses performance information for decision-making" (Dooren, Bouckaert, and Halligan 2015, 20). The definition implicitly combines the *performance*-focus with performance *measurement* as a basis for decision-making, thereby linking it to central processes in strategic management. There is a substantial complexity linked to performance management in the public sector. Which results one shall measure, and results for whom, what kind of efficiency is desired in public agencies and how to measure public value (Pollitt and Bouckaert 2017) are just a few of the many challenging and relevant questions. However, focusing more on the theme of strategic management, such questions fall outside the scope of this thesis.

2.2.3 Strategic management in the public sector

In a broad discussion on the development of strategic management, Joyce and Drumaux (2014) describe how the concept has changed since the 1970s. Strategic management is a concept often described as containing various elements of the strategy process in organisations, including strategic thinking, strategic planning and strategy implementation (George and Desmidt 2013). Therefore, we discuss a few definitions related to the concept of strategy in public organisations.

Bryson describes *strategic planning* as "a deliberative, disciplined approach to producing fundamental decisions and actions that shape and guide what an organisation (or other entity) is, what it does, and why it does it" (Bryson 2015, 515). This definition is broad and involves a

variety of processes and actors. It focuses on the production of decisions and thereby choice of actions. It is both ontological and instrumental, in both describing strategic planning as organisational self-defining and as action-oriented. For government agencies, the act of strategic planning must, therefore, include a variety of actors within and surrounding the agency, including the ministry giving the agency its mandate.

Mulgan defines *public strategy* as "the systematic use of public resources and powers, by public agencies, to achieve public goals" (Mulgan 2009, 19). The definition, being utterly instrumental, is relevant in our case especially concerning the integration of public goals as part of strategising. As with Bryson's definition, the surrounding environment comes into account when we ask how strategic management and performance management contribute to the setting of public goals and implementing public policies.

A different take on the definition of strategy is found in Walker et al. (2010, 731) which distinguishes between *strategy processes* and *strategy content*: «strategy processes are concerned with how objectives and actions are selected and thereby encapsulate the internal dynamics of decision-making in public organisations, and strategy content refers to an organisation's approach to service delivery» (Walker et al. 2010, 731). This definition underlines internal processes and seems to presuppose a rather high level of strategic autonomy in the organisation. Whether this is applicable in our context remains to be seen.

In a national survey of usage of strategic planning in government agencies, Berry and Wechsler (1995, 159) defined strategic planning as

> ".. a systematic process for managing the organisation and its future direction in relation to its environment and the demands of external stakeholders, including strategy formulation, analysis of agency strengths and weaknesses, identification of agency stakeholders, implementation of strategic actions, and issue management."

Different definitions highlight different aspects of the use of strategic management in public organisations: 'strategic planning,' 'public strategy' and 'strategy-processes and strategy content.' The conceptual diversity reveals a need to see a larger, more integrative picture of how these perspectives fit in. Our first step in doing this is by examining a relevant framework for strategic management.

2.3 A framework for strategic management

Poister, Pitts, and Hamilton Edwards (2010) did an extensive review of existing literature on strategic management for the public sector in an attempt to create an integrative framework for the field of study (Poister, Pitts, and Hamilton Edwards 2010). Based on existing research,

they linked various elements of strategic management into an integrative framework. On this basis, they did an evaluative survey of the state of the research field. Following contingency theory (Donaldson 2001), they found substantial empirical evidence on the impacts of

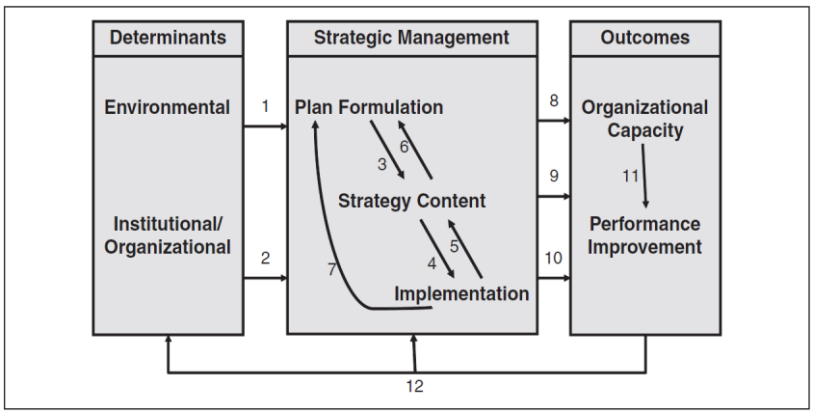

Figure 1 Framework for strategic management (Poister et al.2010)

environmental and institutional determinants on strategic management. The evidence linking strategic planning processes and organisational outcomes, however, was limited. In our context, the framework is of interest, as it connects the main elements of this study.

Poister, Pitts, and Hamilton Edwards (2010) separate three main aspects of the understanding of strategy: determinants, strategic management, and outcomes (Figure 1). Further, they divide strategic management into plan formulation, strategy content, and implementation. Johnsen adapts and elaborates on this framework (Johnsen 2014, 28) and suggests separating four elements of strategic management:

- strategic thinking
- strategy design and strategic planning,
- strategy content
- implementation

By including strategic thinking into the framework, Johnsen inserts an essential prerequisite into the understanding of strategic management, namely the role of fundamentally different perspectives that underlies the various choices of strategic management. Johnsen suggests describing these different approaches to strategic thinking by employing Mintzberg's ten schools of strategy (Mintzberg, Ahlstrand, and Lampel 2009). Any preference among these will have an overall impact on the various parts of the framework.

This thesis seeks to address the three main elements in the framework and the interaction between these. Letters of allocation are understood as a concrete expression of *determinants* – primarily institutional/organisational determinants. The agencies' strategy documents are an expression of the *strategic planning* and, to a certain degree, reflect the underlying strategic

thinking and content, whereas the agencies' annual report describes the outputs and *outcomes* of the combination of the organisation's performance management and strategic management. Our data sources and variables thus relate to all three main elements of the framework as shown in figure 2.

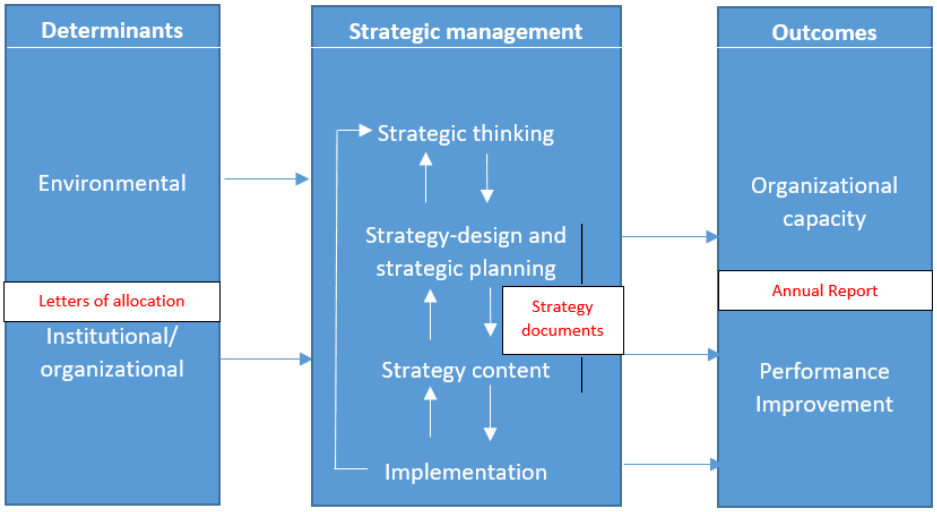

Figure 2 Our use of Johnsen's modified framework by Poister et al.'s in this study

2.4 Determinants and other contextual factors

Analysis of organisational environment plays a central role in theories of strategy, both in the private and public sector (Joyce 2012). In good strategising, an organisation needs to recognise the influence its environment has, and which threats and opportunities lie ahead.

The institutional determinants for public organisations in Poister et al.'s framework are concerned with "the governmental and intergovernmental system of which it is part" (Poister, Pitts, and Hamilton Edwards 2010, 525). This 'system' is assumed to have a major impact on the agencies' approach to strategic management practices. One example relevant to our study is when there exists a requirement to engage in strategic planning, which is the case for Norwegian government agencies. Regulations for financial management in the state expresses that "The agencies' management shall plan and develop strategies with a one-year and multi-year perspective adapted to the agency's distinctiveness "(Ministry of Finance 2015, 29). Also, the annual requirement to give a detailed report on the attainment of performance and financial targets (Ministry of Finance 2015, 26) constitutes an important institutional determinant. In his adaptation of Poister et al.'s framework George (2016) denotes such determinants as "normative determinants". Interestingly, the same regulative document also states that *letters of allocation* shall define "strategic challenges and areas of priority" (Ministry of Finance 2015, 25). That makes sense from the perspective of annual government steering. However, the lines

between the agencies' strategy and the letters of allocation stand in danger of becoming entangled – a possibility central to the examination in this thesis.

Another example referred to by Nutt and Backoff (1993) is the various constraints an agency can experience, which limit their ability to manage strategically. Building on Bozeman's theory of publicness, Nutt and Backoff describe limitations of public organisations as 'mandates and obligations,' which restrain the organisation's autonomy and flexibility. The same sentiment is found in Pollitt et al.'s discussion of 'semi-autonomous' government agencies (Pollitt 2004).

In a discussion of organisational influences on strategy, Andrews et al. describe institutional constraints that both "legitimise certain forms of organisational activity and proscribe others such as formal and informal regulations through which powerful external stakeholders restrict an organisations behaviour" (Andrews et al. 2011a, 18). These perspectives inform the hypotheses of this thesis. Ministries, being influential external stakeholders, direct, prescribe, regulate and instruct government agencies. They do so in measurably different degrees of detail and strength towards different agencies. Do such differences generate differences in the strategic space enjoyed by the agencies?

In light of Bozeman's theory of publicness (Bozeman 1987), public organisations do not relate to competitive forces in the same way as private companies. However, they also need to heed changes and influences from their environment. Depending on the one hand on organisations economic authority and the other on their political authority, Bozeman describes an 'empirical publicness grid' (Bozeman et al. 2013) in which (tax-funded) government agencies rate high on political authority, but low on economic authority.

Ferlie and Ongaro underscore the viewpoint that context is extraordinarily important in strategically managing public organisations (Ferlie and Ongaro 2015). They draw on a combination of Pollitt and Bouckaert's (2011) analysis of public management reform (Pollitt and Bouckaert 2011) and Peters and Painter's (2010) use of 'administrative traditions' (Peters and Painter 2010) to create a comprehensive description of four contextual elements which they deem important to strategic management. These elements, which all influence 'the strategic space' of public service organisations, consists of (Ferlie and Ongaro 2015, 122):

- the administrative tradition
- the autonomy that public service organisations enjoy
- the political-societal expectations towards public service organisations
- the obligations and accountability bases under which public services operate

We cannot expound on all these contextual elements in this thesis. However, one element is important to consider: "the relationship of the bureaucracy to political institutions" (Ferlie and Ongaro 2015, 132) which is a sub-element of 'administrative tradition'.

Peters and Painter (2010) describe separate administrative traditions, for instance, 'Anglo-American','Napoleanic', and 'Scandinavian'. Above all, Ferlie and Ongaro emphasise the autonomy of the agency: "without any actual autonomy in deciding on resources and policy goals, any possibility of developing a strategy for the organisation is hollowed out" (Ferlie and Ongaro 2015, 159). This point touches on a central theme for this thesis. When examining whether the presence of an agencies' strategy in the agencies annual report is dependent on the intensity of steering-demands in letters of allocation, we seek to gain understanding into some aspects of the Norwegian approach to the autonomy of government agencies' strategic management.

2.5 Strategic schools of thought

A strategy can be developed and interpreted in numerous ways. Whittington's four perspectives on strategy (Whittington 2001) and Mintzberg's five definitions of strategy and ten separate schools of strategy (Mintzberg, Ahlstrand, and Lampel 2009) contribute to the understanding these processes. Johnsen (2015) analysed Norwegian state- and municipality-level public organisations using Mintzberg's schools and found that strategic schools of thinking like the learning, environment, power, and design schools were widely used in Norwegian public organisations, but the planning school stood out clearly as the most commonly used school of thought. In his discussion of these findings, Johnsen reasoned that strategy as planning is a means of bridge-building the gap between policy and strategy formulation on the one hand and implementation on the other. Thus, the critique that the planning schools cannot deal with changing circumstances does not have the same significance in public organisations as in private, due to public organisations themselves creating to a certain extent a less turbulent environment through their planning-activity (Johnsen 2015, 260). Performance management, as widely seen in the letters of allocation, coincides with the logic of planning-school. In the letters, we often find politically based general aims broken down to more specific aims which again can be given one or several performance indicators as a basis for performance measurement. Within the logic of the culture school, aims will have a stronger institutional function, being symbolic bearing expressions of organisational values and instruments of building a reputation (Christensen et al. 2015). We do not map the use of strategic schools in this study. However, noting the significance and explanation of the usage of planning school

logics, it has implications on our discussion of findings. Also, Mintzberg's environmental school, where strategy is seen as a reactive process, will be reflected in the discussion because we define letters of allocation as an institutional determinant.

2.6 Strategic stance

In their analysis of classifications of organisational strategy, Boyne and Walker (2004) found existing frameworks to be lacking in many respects when applied to public sector organisations. Drawing on a typology developed by Miles and Snow (1978) and ideas from Porter's model of strategic actions (Porter 1980) they developed a classification-framework of public sector organisational strategies. In it, they distinguish between strategic stance and strategic actions. The two perspectives are logically intertwined in the sense that certain strategic stances conceptually imply specific strategic actions.

A strategic stance is "a general approach that describes the organisation's position and how it interacts with its environment" (Boyne and Walker 2004, 232). The term *position* is here a term which needs some clarification. Miles and Snow describe position as 'types of organisations' (Miles et al. 1978, 550). An organisation in their conception can, therefore, be for instance "prospector"-oriented. Boyne and Walker, however, emphasise the categories of position as not exclusive, but descriptive of different aspects of how an organisation relates to its environment. The one and same organisation, therefore, can have elements of different strategic stances simultaneously. On different issues and in different parts of the organisation the stance can be different, which again influences which strategic actions an organisation, or part thereof, takes. Simplifying the Miles and Snow-taxonomy, they operate with three possible stances: prospector, defender, and reactor. Prospector-stance is characterised as pioneering, seeking new markets and experimenting with new content and means of service delivery (Boyne and Walker 2004, 240). Defender-stance is late in the adoption of new possibilities, prefers to stick to the known and tried and gaining a secure hold on its niche in the market. Reactor stance does not take an active stance to strategic management but changes only when forced to do so by its environments.

Adapting Porter's strategic actions, they differentiate between 5 actions: change markets, change services, seeking revenues, external organisation, and internal organisation. In a later paper Andrews et al. (2011b) develop an operationalisation of the three strategic stances which they use in their survey of Welsh local authority departments. In examining government agencies, we limit our examination to the strategic stance of strategic aims, excluding an analysis of 'strategic actions'.

2.7 Performance management in governmental agencies in Norway

Performance management was made mandatory for government agencies in 1997 (Christensen et al. 2015) and is today the basic principle of management in government organisations, according to the Agency for Financial Management (The Norwegian Government Agency for Financial Management 2010). However, various usages of result-oriented management have been used in municipal and state agencies for decades (Johnsen 2007, 19ff). In Norwegian government agencies, performance management is typically implemented through a set of main aims derived from the agency's purpose. Concrete aims are derived from the main aims. Performance indicators are often linked to the aims. Also, letters of allocation often employ the use of assignments for specific projects which does not necessarily fit into the hierarchy of aims. All these parameters, main aims, aims, performance indicators and assignments, are given through the annual letter of allocation alongside fiscal budgets and other demands on the agency. Some letters directly link aims and performance indicators to performance budgeting.
One also can find main goals and derived objectives in the agency's strategies. These, however, are intended to be devised as more long term oriented. The definition given in the official guide on performance management for state organisations, states that a strategy is ".. the overarching choices and commitments in the organisation, which shows which changes need to be prioritised the following years in order for the organisation to reach its main long-term goals" (The Norwegian Government Agency for Financial Management 2010, 9). The guide states that the ideal is that performance management should be based on the strategy. Whether this translates into practice, is one of the questions we pose in this thesis.

2.8 Conceptual model and hypotheses

The model used in this analysis (figure 3) is a conceptual path model of central variables which might shed light on our research question. Hypotheses are based on relationships between variables in the model. Variables and relationships are based on the above theory, especially Poister et al.'s framework, Boyne and Walker's theory of strategic stance and theory on performance management. Other correlations between these variables and organisational size and ministry-dependency are examined in addition to the model as supplemental explanations.

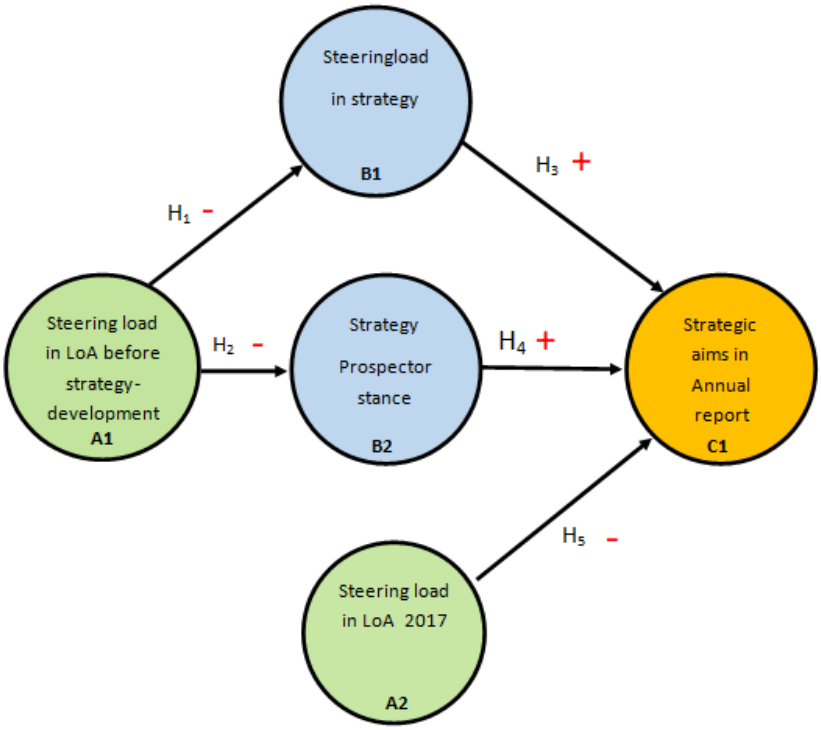

Figure 3 Conceptual model with correlation hypotheses

2.9 Hypotheses

The hypotheses in this thesis derive from a fundamental assumption: the steering load in letters of allocation influence the strategic management process in government agencies and the steering load defined in strategies. We measure this effect quantitatively in strategy content, and how much of the strategic aims are found in the annual report – as a reflection of how active the organisation relates to its strategy. From this fundamental assumption, we have derived the following hypotheses related to our model:

H_1: (A1) Steering load in Letters of Allocation before strategy development is negatively correlated with (B1) Steering load in Strategy.

H_2: (A1) Steering load in Letters of Allocation before strategy development is negatively correlated with (B2) Strategic Prospector Stance.

H_3: (B1) Steering load in Strategy is positively correlated with (C1) Strategic aims in the annual report.

H_4: (B2) Strategic Prospector Stance is positively correlated with (C1) Strategic aims in the Annual report.

H_5: (A2) Steering load in Letters of Allocation 2017 is negatively correlated with (C1) Strategic aims in the Annual report.

3 Methods

3.1 Research design

3.1.1 Initial choices

We designed the model and hypotheses with the use of Partial Least Square Structural Equation Modelling (PLS-SEM) in mind. Our hypotheses, however, are designed as (linear) bivariate relations between certain indicators. PLS-SEM is a multi-variate-analysis tool using a series of regression analysis and factor analyses of indicator variables. Models, therefore, should be based on possible causal effects. The relationships are therefore designed with arrows in our model, even if the bivariate analysis in our hypotheses do not presume causal direction. We give a closer description of our use of PLS-SEM below, but here we note that our hypotheses and our use of PLS-SEM follow somewhat different lines of analysis.

Researching strategic management in government agencies can be done in various ways. Ongaro notes that there seems to be a Scandinavian inclination towards using an interpretative and qualitative approach in studying public administration (Ongaro and Van Thiel 2018, 108). One example of such an approach is found in the study by Christensen, Ramslien, and Lægreid (2006) in their thorough study of strategic and administrative processes in The Norwegian Directorate of Immigration.

In attempting to generate a birds-eye perspective of strategic management at an entire level of government agencies in Norway, we have chosen an exploratory approach, using quantitative and qualitative content analysis (Krippendorff 2019). An initial examination of both letters of allocation and strategy documents revealed a substantial variance between the agencies, a fact that would have been lost in a limited case-study approach. However, a broad quantitative approach has obvious limitations: We had to limit the study to only a few selected variables. Semantic analysis of the strategy documents was limited, and the organisational process leading up to the strategy documents was not examined. A closer intra-organizational study as in the strategy-as-practice approach (Whittington 2001, Jarzabkowski 2005, Johnson et al. 2007) was therefore not applicable in this study.

The approach is mainly deductive, in the sense that we built a hypothetical variable-model with hypotheses based on theoretical assumptions. However, the study has a definite explorative edge, dealing with unchartered terrain (Hair et al. 2017, 9). To our knowledge, no one has done a population-wide study of strategic management of central administrative agencies in Norway or any other country before.

Inductive and deductive approaches need or should not be strictly exclusive designs. Coding data via multiple approaches, both quantitative (often used in deductive setups) and qualitative (often used in inductive setups) is beneficial in a multiparadigm-reality such as public administration (Yang, Zhang, and Holster 2008, 38). In this study, dealing with the question of strategic stance alongside the quantitative variables we examine, represents a mixed methods approach.

As far as possible, the approach is an extensive population study (Thiel 2014), meaning we collect data from every possible unit in the selected level of government agencies. The design is therefore not a sample-study intended for predictive purposes for an entire population, hence we need not develop a sampling strategy.

We have chosen a cross-sectional design (Justice 2008) by focusing on strategy documents which include the year 2017 in its strategic span. However, in exploring possible causal relations, we have had to obtain data from letters of allocation before 2017 (figure 4). The cross-sectional design lets us draw some conclusions but denies us the ability to generalise to other levels of government or periods.

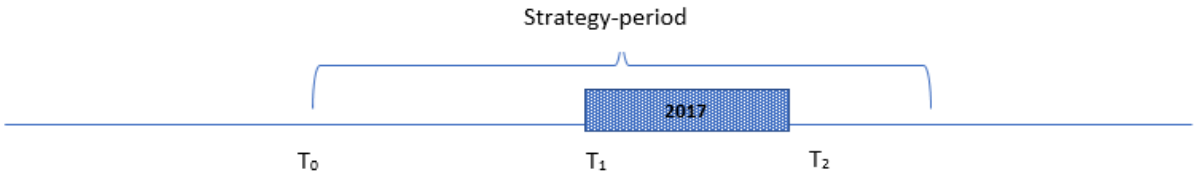

Figure 4 Timescale of LoA, Strategy, and Annual Report

T_0: Beginning of time frame of the strategy document. LoA_0 collected from this year.

T_1: Letter of allocation for 2017

T_2: Annual agency report 2017 written primo 2018

3.2 Choice of units included in the study

Government agencies in this study, such as directorates, agencies and inspectorates, are called "central-administrative agencies" by the Norwegian Centre for Research Data (NSD). The whole population of Norwegian central-administrative agencies as of 1 January 2017 consisted of 62 agencies (NSD 2018). One agency was not included in this study because it merged with another agency in 2017[2], leaving 61 agencies for the population study. The included agencies

[2] Directorate for Emergency Communication was excluded because it was terminated during 2017 (by inclusion in another agency).

in this study, therefore, are not based on a sampling-strategy, but every available unit in the target population. See Appendix I for a list of all the agencies in the study.
A prerequisite for using such a relatively large group of units in this kind of thesis is limiting the scope of variables used from each unit. Moreover, other studies give additional data and analyses thereof which is used as background information in the discussion.

3.3 Data sources

We have based our data collection on a specific set of documents concerning strategic management and performance management in the chosen agencies. These documents are secondary sources, not being immediate results of empirical data gathering as in interviews or direct observation in a given organisation. The drawback of this approach is that the (anonymous) authors of the documents make many choices which we cannot estimate. Administrative rules, agency needs, or even individual preferences can guide what is included and excluded in the documents. An advantage to using archival data is that the documents are public, meaning they are read by the whole agency, other stakeholders and the public. That demands a level of accountability, which might be harder to obtain otherwise.

The following documents were collected from NSD's database (NSD 2018) and the agencies' webpages.
Strategy documents, which include the year 2017 in their strategic timeframe. Gathered from the agencies' webpage (41 documents obtained).
Letters of allocation – one from the year 2017 (61 documents obtained) and another dating to the start of the strategic timespan (41 documents obtained). Supplemental letters of allocation were not included.
Annual reports for 2017. Most of these documents were found on the NSD-database, but some were collected from the agencies' webpage (61 documents obtained).
A potentially relevant source for this inquiry, but omitted, was the "agency directive"[3]. An example of such a document is the agency directive for the Data Inspectorate given by the Ministry of Local Government and Modernisation (Ministry of Local Government and Modernisation 2016). In a more thourogh study of fewer agencies, such documents should indeed be collected, but we did not. The exclusion has been necessary due to the scope of this thesis – but the omission constitutes a methodical weakness deemed acceptable, given the focus

[3] This term is the authors attempt at translating the Norwegian term «virksomhetsinstruks».

is more on strategy documents. We also believe that the omission does not represent a vital material loss, as most of the same content will reappear in letters of allocation and strategy documents.

3.4 Gathering data

Gathering data was done in several phases. Initially, the relevant documents were downloaded from NSD-database, agencies webpages, and archived webpages.

In the search for the agencies' strategies we primarily searched their webpage. We also used the archived versions of their webpage (https://archive.org) and a google search ("*agency name"* + "strategy" / "agency strategy" / "agency plan"). Using this approach, we were able to collect strategies for 2017 from 41 agencies. No strategies were found for 20 agencies.

The documents were analysed according to the chosen model, hypotheses, variables and indicators. The data was stored in Excel documents. Relevant data from the Excel documents were imported into SPSS and SMART-PLS for analysis. SMART-PLS (Ringle, Wende, and Becker 2015)[4] is a program developed specifically to perform PLS-SEM analysis and additional analysis of the data, which are relevant when reporting results in a PLS-SEM study.

3.5 Overview of latent variables and indicator variables

In our PLS-SEM analysis, we examined the relationship between 5 latent variables, consisting of a total of 17 indicator variables.

[4] Use of the program SMART-PLS requires authors to list it in their references as I have done.

Table 1 Overview of latent variables and respective indicator variables

Latent variable	Abbr.	Ex/En	Formative / reflective	Indicator variables	Measurement-type
Steering load in LoA before strategy-development	LV1	Exogenous	Reflective	Main aims	numeric
				Partial aims	numeric
				Steering-indicators	numeric
				Assignments	numeric
Steering load in LoA 2017	LV2	Endogenous	Reflective	Main aims	numeric
				Partial aims	numeric
				Steering-indicators	numeric
				Assignments	numeric
Steeering load in strategy	LV3	Endogenous	Formative	Aims	numeric
				Vision	Binary
				Values def	Binary
				Enviroment analysis	Binary
Strategic stance P	LV4	Endogenous	Formative	Prospector	normalized numeric (0..1)
(Strategic stance D)				Defender	normalized numeric (0..1)
(Strategic stance R)				Reactor	normalized numeric (0..1)
Strategy in Annual Report 2017	LV5	Endogenous	-	Strategy aims in AR	0-100%
				Strategy referred to	Binary

3.6 Operationalising indicator variables

Aims in letters of allocations and strategy documents were obtained by analysing the respective documents. When analysing strategies, we split aims into four different groups:

Input-aims focus on resources, IT and infrastructure and competency in the agency, for instance: "Develop new IT solutions and ensure implementation".

Activity/process aims focus on the ongoing processes and activities in the organisation. In this group, we included demands of activities, which the agency is required to do in the coming year. Such demands often use the expression "The agency shall …", "The agency will in the coming year…"

Output-aims focus on the specific "product" which the agency is designed to produce, whether it be service delivery or other products. For instance, the Data Inspectorate expresses in their strategy, "We will further develop [the agency's] webpage to become the most important channel for guidance and information".

Outcome-aims focus on societal or other user-oriented aims and refers to the ultimate effect of the agency's effort. Pollitt and Bouckaert (2017) separate intermediate and final outcomes. In this thesis, we do not. An example of an output aim from the ombudsman for Children: "Aim: Children have a real influence on designing policy and plans on all levels of society".

Main aims were counted as such only when explicitly named so.

Performance-indicators were counted as such when they were explicitly named so.

Assignments are technically a subgroup of activity demands but often are explicitly defined in LoAs. When found as explicitly defined assignments, they were counted as such.

Visions in strategies were counted with a dummy variable as having it = 1 or not having it = 0. Only statements explicitly referred to as "vision" were counted.

Values in strategies were counted with a dummy variable as having it = 1 or not having it = 0. We also analysed values stated in strategy documents with Hood's taxonomy for administrative values (Hood 1991) and Bozeman's differentiation of seven kinds of values in public organisations (Bozeman 2007) as control variables. Only statements explicitly referred to as "values" were counted as such.

Environmental analysis in strategies was counted with a dummy variable as having it = 1 or not having it = 0, regardless of being SWOT-inspired or more lose reflections of the agency's organisational environment.

The strategic stance was measured for each strategic aim, each aim being either prospector-oriented, defender-oriented or reactor-oriented, depending on whether the aim matched the questions in the taxonomy developed by Andrews et al. (2011b). See more on our approach to operationalising in chapter "3.11 Analysis of strategic stance" below.

Strategy in the annual report was probed using two separate indicator variables:

***Reference to strategy*:** any reference to the agencies institutional strategy gave a "1" on a dummy variable, otherwise a "0". We did not count references to general public strategies which concerned the agency or thematic strategies, for instance "media strategy".

Per cent of strategic aims in the annual report: we also searched the annual reports (2017) for each aim found in the agency's strategy document (1229 aims). We used both the "search" function in Adobe Acrobat, and a manual search in case the phrasing if an aim was slightly changed. The number of aims from the strategy found in the annual report formed the basis for calculating how many per cents of strategic aims from the strategy was found in the annual report.

In letters of allocation, we only registered main aims and aims, not dividing aims into subgroups on a production value chain as in the analysis of strategies. We did this for two reasons. First, our primary objective was to analyse the effect of the total external steering-pressure agencies experience. Second, too many indicator variables for LoAs would violate the limitations of PLS-SEM analysis, given the relatively low number of units in our study.

3.7 Variables and indices examined in our hypotheses

Latent variables are constructs consisting of several indicator variables. The hypotheses, therefore, using bivariate analysis, were not based on the latent variables used in our PLS-SEM analysis, but instead selected indicator variables and simple additive indices based on indicator variables.

"Steering load in LoA before strategy" (A1) is a value derived from adding aims, main aims, performance indicators and assignments without any weighing. The same principle with "Steeringload in LoA 2017" (A2).

"Steering load in strategy" (B1) is the sum of the main aims and aims.

"Strategic prospector stance" (B2) is the per cent of aims in strategy documents which relate to prospector oriented typology. See more on this below.

Strategic aims in the annual report (C1) is the per cent of strategic aims from the strategy document which we found in the annual report.

3.8 Other control variables

Being an explorative study, we included various control variables to explain the variations in our latent variables.

According to Vinzant and Vinzant (1996), the size of public organisations affect the resources which are allocated to strategic management. Larger organisations, with several divisions, also have a more complex challenge in coordinating resources strategically. From an organisational contingency-theory perspective, size and structure is an important determinant (Donaldson 2001). An agency's size and complexity type were, therefore, among our control variables.

Agencies' structural complexity also has relevance in this study. We recorded whether the agency was a 'headquarter' – being part of a more complex organisation scheme with district offices, or whether it was a 'national organisation' – being a more self-contained organisational unit.

Another control variable we employed was the agencies' so-called policy area. With inspiration from Sørensen and Thomsen's (2018) separation of state-functions, we distinguished between 5 areas of policy: Economy and Industries, Welfare, Climate and Environment, Nightwatch-state, and International functions. Several of our findings were controlled for variation in the differences in policy-focus.

Different ministries may develop different traditions regarding the use of performance management in letters of allocation. Parent ministry was therefore also registered.

3.9 Partial Least Squares Structural Equation Modelling, PLS-SEM

SEM-analysis, Structural Equation Modelling, is described as a second-generation technique within multivariate methods (Hair et al. 2017). First-generation methods comprise of exploratory methods like cluster analysis, exploratory factor analysis and multidimensional scaling, and confirmatory methods like analysis of variance, logistic regression, multiple regression, and confirmatory factor analysis. Second generation techniques go further in statistical strength and flexibility with the use of Partial Least Squares Structural Equation Modelling (PLS-SEM) as an exploratory tool and Covariance-Based Structural Equation Modelling (CB-SEM) as a confirmatory tool.

Hair (2017) describes some of the benefits of using SEM-analysis approach as

- the ability to use composite variables (often called variates),
- the ability to use unobservable (latent) variables – through indicator variables
- the ability to account for measurement error in observed variables
- simultaneously examine relationships among measured variables and latent variables.

SEM-analysis is used as a powerful predictive statistical approach – the analysis of the sample giving predictability to the population. However, in this study, we use the tool in an exploratory fashion on population-wide data. It is therefore irrelevant in our case to ask for a statistical predictive value.

Latan and Noonan (2017, 27) describe PLS path-modelling as a useful tool both for exploratory and predictive research. The model assessment is different in each case, and it is essential to be aware of the appropriate usage, even if PLS-SEM is known for its ability to operate trustworthy with fewer units of analysis than alternative techniques (e.g. CB-SEM). The PLS path modelling uses a sequence of regressions in terms of weight vectors (SmartPLS-GmbH 2018). "PLS-SEM path modelling, if appropriately applied, is indeed a "silver bullet" for estimating causal models in many theoretical models and empirical data situations" (Hair, Ringle, and Sarstedt 2011). However, the same authors also warn against potential misuse of the method in some ways (Hair, Ringle, and Sarstedt 2013), among them, using too small a sample in predictive purpose.

Using PLS-SEM properly requires following specific steps in data acquisition, analysis, and reporting. Hair (2017) describes using PLS-SEM in a set of stages

1. Specifying the structural model
2. Specifying the measurement models
3. Data collection and examination,
4. PLS path model estimation,

5. Assessing PLS-SEM results of reflective/formative measurement models,
6. Assessing the results of the structural model
8. Interpretation of results and drawing conclusions.

The seventh stage "7. Advanced PLS-SEM Analyses" was not included here as it will not be used. These seven stages will all be dealt with in this thesis, but not necessarily in order.

Our **structural model** concerns the relationship between the latent variables in the model and is the inner model in Figure 18. The model assumes probable causal relationships based on the timeframe the documents were made and the probability that the content of earlier documents influenced the content of later ones. All documents and variables pertain to the same field of inquiry (strategic management and performance management) for each agency, therefore the thematic tightness and the timeframe aspect should be reasons good enough to assume probable relationships between these variables.

Measurement models concern how we collect indicator variables and interpret how these relate to the latent variables (the 'outer model' in Figure 18). Hair et al. underlines that "a sound measurement theory is a necessary condition to obtain useful results from PLS-SEM" (Hair et al. 2017, 44). In our case, we lean on already established scales of measurement for measuring steering load in letters of allocation and interpreting strategic stance.

In using PLS-SEM one needs to be aware whether the latent variables are formative or reflective. In *reflective measurement*, the latent variable causes or explains the indicator variables. The model denotes this with arrows going from the construct to the indicators. In *formative measurement*, the indicator variables cause the latent variable, i.e. they are the main aspects of the latent variable. The model denotes this with arrows going from the indicators to the construct. The indicators in formative measurement models define the latent variable and can therefore not be individually deleted in an exploratory manner, as one more readily can do with reflective measures.

To exemplify: We define the latent variable *strategic steering (LV3)* in strategies as determined/caused by strategic aims (main and subordinate), use of vision, use of values and use of environmental analysis. LV3 is, therefore, a formative composite value. On the other hand, steering loads in letters of allocation (LV1 and LV2) are numerous. We have chosen aims (main and subordinate), performance indicators and assignments as indicators but could have added more (economic and other demands). The indicators, therefore, reflect various aspects of the concept of steering load in letters of allocation, and we interpret the measurement model as reflective.

In a given model, reflective indicators can be added or subtracted depending on whether they show explanatory power of the construct or not. In formative models, the included indicators define the latent variable and to add or subtract an indicator in those instances will, therefore 'alter the nature of the construct' (Hair et al. 2017, 47) and should be avoided.

As to the number of indicators per latent variable, Hair et al. (2017) recommend as a rule of thumb not having more indicators per latent variable than 1/10 of N. Also N should not be less than ten times the number of structural paths, of which we have five.

3.10 Why we chose PLS-SEM analysis

3.10.1 Sample-size requirements

PLS-SEM is renowned for strong statistical resilience even when using smaller sample sizes. However, even this ability has its limits. Using an adapted version of the 10x rule appropriately (Hair et al. 2019) we conclude we are within the recommended range. See table 2.

Table 2 Minimum sample sizes in PLS-SEM

Measure	Max based on full data set (N=61)	Max based on dataset of agencies with strategy (N=41)	Our model
Maximum number of formative indicators	6	4	4
Number of structural paths directed at a particular latent construct	6	4	3

We also chose PLS-SEM because it does not presume normal distribution of data, as do many other approaches. We elaborate this reason with detailed description of the non-normality of our data in section 4.1.

One of the main reasons for choosing a path-analysis tool was to follow a possible logical line from letter of allocation, through strategy to annual report. When it became clear that we also needed to use latent variables, the choice was clear.

3.10.2 Use of formative and reflective measures

Our outer models (measurement models) used both formative and reflective measures. Formative measures demand that the indicators should cover the entire, or significant, aspects of the content of the construct. Reflective measures can be overlapping or deleted if their factor loading is too low. However, we chose not to do this, because that would reduce the number of indicators too much. Leaving them also shows weaknesses in our initial indicator assumptions – which, in an exploratory study like ours, is also a relevant finding.

3.10.3 Use of categorical measures

We did not include any categorical measures with more than two modalities but did use four binary indicators (dummy variables). We had no binary single-item constructs, coded as dummy variables, thus not triggering a violation of the ordinary least squared regression, as cautioned by Hair et al. (2012).

3.10.4 Use of single-item measures

PLS-SEM does allow using single-item measures, but it is recommended to avoid this, if possible. In measuring the strategic stance, which is a multidimensional construct, we needed to run the PLS-SEM model three times, each with different strategic-stance dimension. Our measurement model for each strategic stance is described below.

3.11 Analysis of strategic stance

Strategic stance, as used in the framework of Boyne and Walker, is a multidimensional variate not countable as a single variable. Operationalisations of these dimensions were developed by Miles and Snow's definitions of the terms, and further in Boyne and Walker's adaptation to public sector service organisations (Boyne and Walker 2004). Following Boyne and Walker, strategic stance must not be treated as a single continuous variable, but as a multidimensional description of how organisations relate strategically to their surroundings. One way of getting past this methodical hurdle is to separate the three strategic stances as separate latent variables, each operationalised by their respective indicator. Boyne and Walker used this approach in a study of municipal authorities in Wales (Andrews et al. 2011b). They asked respectively four, three and five questions (Table 3) on prospector, defender, and reactor stance to officials in the organisation. Despite them examining a municipal level of governance, we consider that the same questions can be used in our approach. We do not pose the questions to officials but use them as an analytical tool to investigate the main strategy documents of governmental agencies. In Boyne and Walkers case, the interviewees used a Likert scale with scores of 1–7 to answer each question. In our approach, we analyse each aim stated in the strategy with regards to if it answers a prospector question, a defender question or a reactor question.. Thereby, each agency got a total score on three variables: P, D and R scores. If a strategic aim scored positively to one of the Prospector questions, the P-score was increased by 1. If the aim answered positively to one of the Defender-questions, the "D"-score was increased by 1. The sum of scores for each stance was further normalised, receiving a final normalised score between 0 and 1. This approach created a comparable ratio scale (0-1) of measuring strategic stance regardless of how

many aims a strategy had, which was necessary to include data from all of the agencies in a meaningful way in our PLS-SEM analysis. Thereafter we ran the PLS-SEM analysis three times, one with each iteration of strategic stance.

In our main PLS-SEM analysis-model (figure 18), we used values for Prospector-stance but also tested the model with Defender- and Reactor-scores as control-variables. The approach adapts Andrews et al.'s (2011b) approach and in our estimation represents a valid adaption within the scope of this project.

Table 3 Questions for analysing strategic stance, Andrews et al. (2011a)

Str.stance	Question posed to strategic aims
Prospector, P1	The agency continually redefines service priorities
Prospector, P2	The agency seeks to be first to identify new modes of delivery
Prospector, P3	Searching for new opportunities is a major part of the agency's overall strategy
Prospector, P4	The agency often change focus to new areas of service provision
Defender, D1	The agency seeks to maintain stable service priorities
Defender, D2	The service emphasizes efficiency of provision
Defender, D3	The agency focuses on its core activities
Reactor, R1	The agency has no definite service priorities
Reactor, R2	The agency changes provision only when under pressure from external agencies
Reactor, R3	The agency gives little attention to new opportunities for service delivery
Reactor, R4	The service explores new opportunities only when under pressure from external agencies
Reactor, R5	The agency has no consistent response to external pressure

3.11.1 Validity-issues measuring strategic stance

Some questions arise from the choice of utilising Boyne and Walker's taxonomy. The taxonomy is developed for "public-service-organisations" and is widely applied in research on agencies on a municipal level of government delivering public services directly to the citizens. The taxonomy is however arguably relevant also in cases of higher governmental agencies, as in this study, where the public service is not necessarily given directly to the general population. State agencies also must relate to their economic and political environment, and they do have a "marked" they deliver their services to, including other public agencies on state or municipal level or to "society" in general. Boyne and Walker do not define 'public service organisations' more than 'agencies that provide public services'. They do however make hypotheses based on their typology. In the fourth hypothesis, they state that 'The higher an organisation sits in a governmental hierarchy, the less likely it is to be a reactor' (Boyne and Walker 2004, 246), which implies a supposed relevance also to higher governmental agencies.

3.11.2 Analysis of Annual Report

In analysing the presence of strategic aims in each agency's annual report, we used a simplified document analysis (Rapley 2007). All aims in the strategy document were searched for in the annual report, using document search-function in Adobe Acrobat. A manual search was also done, which revealed some instances of slightly rewritten strategic aims when the annual report, for instance, was written in 'Norwegian Nynorsk'[5].

Counting how many aims from the strategy document appeared in the annual report gave us the ability to calculate how many per cent of the strategic aims in the strategy documents appeared in the annual report. We discuss further issues of reliability and validity below.

3.12 Questions of reliability and validity

The trustworthiness of the results of this thesis relies on several circumstances. A research setup has sound validity if the variables collected and analysed are relevant for the research question (Ringdal 2018). The use of PLS-SEM has rigorous demands for construct reliability and validity on the measurement model (indicators, latent variables, and their relationship) and the structural model (the latent variables and their relationship, including assumptions on causal direction). These demands will be shortly mentioned here – and used when reporting on results.

3.12.1 Face validity

Using established taxonomies as described above, contributes to the question of validity only if the variables are the relevant ones for our case. Again, this comes down to the question of how to understand the research question: "How does performance management interact with strategic management in government agencies?"

Constraining measurement of strategic management to analyse an agency's main strategic document, certainly has its limitations. Both in definitions and frameworks, we have described strategic management as a multifaceted undertaking in organisations. However, focusing on strategic aims in strategic documents, letters of allocation and the reporting on these aims in the annual report, we follow a consistent line of logic through central aspects of strategic management and performance management and thus arguably can gain some valuable insights into the how performance management interacts with strategic management.

The annual report is used as a reference point in measuring how active the agency relates to its strategic management. We measure how much the strategic aims are duly reported on in the

[5] Norway has two similar, but different official written languages, and three when counting sami language.

annual report and whether the institutional strategy is referenced at all. By doing this, we measure some elements in what Wolf and Floyd (2017) call "distal outcomes" of strategic management. The annual report is the principal, formal place where the annual "state of the agency" is reported. However, there arguably is a potential bias involved in measuring whether strategic aims are reported. The annual report is the most important notice to the ministry on results which the agency has accomplished in the previous year. The results of the performance indicators must be reported. Any results on obtaining goals set in the strategic plan, however, are not compulsory. One should nevertheless be able to assume that if the agencies' strategy "clarifies the most important crossroads and changes that need to be done in the coming years to attain the agencies' main aims" (The Norwegian Government Agency for Financial Management 2010), in agencies with non-dormant strategies, the annual report should incorporate some attention to it. The structure of the annual report is defined by the Ministry of Finance (Ministry of Finance 2015, 26) which determines that the annual report shall describe results and achieved aims. Especially in chapter 3 ("Activities and results") in the Annual Report, one might, therefore, suppose a focus on the aims and goals put forth in the Letter of Allocation. It is nevertheless expectable to find an assessment on the status of implementation of strategic goals either in the same chapter or in chapter I ('Executive report') or chapter 5 ('Future outlook'). We, therefore, understand the absence of any reference to the agencies strategies, aims, and perspectives as indicative to the strategy not being operational. Having a multi-year perspective, we must recognise that the strategy can nevertheless influence the strategic management of the agency through the continuing dialogue between the agency and their ministry (Christensen, Ramslien, and Lægreid 2006, 132). Concluding the discussion on using the annual report as a source, not having any other obtainable data source to measure the skewness mentioned above, we are left with acknowledging that this is a possible weakness in the research setup.

3.12.2 Statistical reliability and validity

In considering the statistical reliability in using PLS-SEM, Hair et al. (2019) discussed the use of various approaches, describing Cronbach's alpha as "too conservative" and "Composite Reliability" is too liberal. The question, however, is whether this is applicable in the case of this project since we do not attempt to develop any predictions based on a sample, but descriptively use the statistical results for the data at hand. Details on PLS-SEM validity are reported in section 4.3.1.

4 Results

In this chapter, we present findings in our data, using descriptive statistics, univariate analysis, bivariate analysis and multivariate analysis, including results from PLS-SEM analysis. We focus on examining the results of the main variables and subsequently examine correlations with our control variables. This chapter, therefore, is descriptive and analytical. In the next chapter, we engage in interpretations of our findings and discussions. As outlined above, our method is both cross-sectional (the year 2017), and we examine the whole population of the agencies of interest. Predictive statistics are therefore not in focus.

4.1 Univariate analysis and descriptive statistics

PLS-SEM does not assume that the data has a normal distribution, as do other approaches, like CB-SEM. PLS-SEM, therefore, is useful whether the sample data is normal or non-normal. Using Kolmogorov-Smirnov and Shapiro-Wilk tests we found our data to be consistently non-normal, underpinning the necessity of using the PLS-SEM approach (Table 4). Only the indicator for the number of strategic aims (Str_A) showed levels above 0,05 on the K-S test, but the SW-test being 0.000 dismissed the value as normal-distributed. A test of skewness and kurtosis confirms these findings. One indicator scored below -1 on skewness, thirteen indicators scored above +1, and no indicators scored between the normal-distribution parameters of -1<x>+1. Average kurtosis for the indicators was 6.15 – well outside the range of normal distribution.

Table 4 Statistics of indicators and test of data-normality in indicator variables

								Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Mean	N	Std. Deviation	Minimum	Maximum	Skewness	Kurtosis	c	df	Sig.	Statistic	df	Sig.
LoA_0_MA	3.44	41.00	3.19	0.00	17.00	2.02	6.99	0.14	40.0	0.034	0.83	40	0.000
LoA_0_A	19.83	41.00	18.36	0.00	83.00	1.57	2.82	0.16	40.0	0.012	0.85	40	0.000
LoA_0__PI	13.37	41.00	15.50	0.00	72.00	1.74	4.16	0.20	40.0	0.001	0.80	40	0.000
LoA_0_As	10.88	40.00	21.95	0.00	112.00	3.13	11.46	0.31	40.0	0.000	0.56	40	0.000
LoA17_MA	2.92	61.00	2.64	0.00	15.00	1.95	7.01	0.17	40.0	0.006	0.80	40	0.000
LoA17_A	19.26	61.00	17.97	0.00	78.00	1.39	1.57	0.20	40.0	0.000	0.87	40	0.000
LoA17_PI	9.89	61.00	12.36	0.00	50.00	1.66	2.46	0.22	40.0	0.000	0.77	40	0.000
LoA17_As	10.25	61.00	21.10	0.00	104.00	3.27	11.71	0.30	40.0	0.000	0.57	40	0.000
Str_MA	3.32	41.00	3.19	0.00	15.00	1.14	2.83	0.20	40.0	0.001	0.84	40	0.000
Str_A	27.12	41.00	20.15	0.00	117.00	2.31	8.90	0.14	40.0	0.055	0.82	40	0.000
P%	6.44	41.00	8.34	0.00	33.33	1.62	2.20	0.22	40.0	0.000	0.78	40	0.000
D%	93.01	41.00	8.50	64.44	100.00	-1.60	2.41	0.21	40.0	0.000	0.80	40	0.000
R%	0.55	41.00	1.87	0.00	8.82	3.68	13.22	0.52	40.0	0.000	0.33	40	0.000
% of Str aims in AR	10.25	41.00	24.53	0.00	100.00	2.99	8.38	0.34	40.0	0.000	0.48	40	0.000

Table 5 Statistics of binary variables

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Str_values	41	0	1	21	0.51	0.506
Str_Vision	41	0	1	24	0.59	0.499
Str_SWOT	41	0	1	14	0.34	0.480
Str ref in AR	41	0	1	32	0.78	0.419

One cannot do estimations as to any normal distribution of binary variables. However, testing any predictive relation between such variables can be relevant. The test of binary variables was only counted with N=41 because they were only found in agencies with strategies. A Chi-square test and Fisher's exact were done for all relations of binary variables and only found a significant correlation between the use of vision and use of values (Pearsons Chi-Square: 5.5, Sig 2 sided: 0.19, Fishers Exact test: Sig 2 sided 0.028).

Agency size

The 61 agencies in our study had a variety of sizes, from 7 FTE (The Norwegian Biotechnology Advisory Board) to 13670 FTE (NAV- Directorate of Labour). Eighteen agencies were under 100 FTE, and seven were over 1000 (Fig. 5)

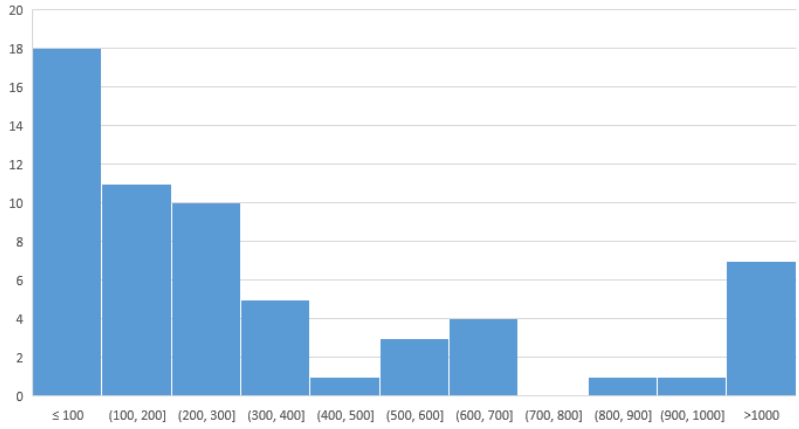

Figure 5 Histogram for agency sizes, in FTE

Twenty-five agencies were 'headquarters', and thirty-six were 'national organisations'.

The ministries varied in age between 3 and 155 years old (Directorate of Public Roads established 1864).

4.2 Bivariate analysis

4.2.1 Agencies

The 61 agencies were subordinated to fourteen ministries, and five separate policy-areas (Table 6).

Table 6 Agencies by ministry and policy-areas

Ministry	Agencies in study	Policy-area
Ministry of Agriculture and Food	2	Economy, Industries
Ministry of Finance	5	Economy, Industries
Ministry of Petroleum and Energy	2	Economy, Industries
Ministry of Trade, Industry and Fisheries	8	Economy, Industries
Ministry of Transport and Communications	8	Economy, Industries
Ministry of Climate and Environment	3	Environment and Climate
Ministry of Foreign Affairs	1	International
Ministry of Defence	1	Nightwatch-state
Ministry of Justice and Public Security	7	Nightwatch-state
Ministry of Children, Equality and Social Inclusion	3	Welfare
Ministry of Culture	3	Welfare
Ministry of Education and Research	3	Welfare
Ministry of Health and Care Services	5	Welfare
Ministry of Labour and Social Affairs	4	Welfare
Ministry of Local Government and Modernisation	6	Welfare
Total	61	

4.2.2 Variables measuring performance management

Letters of allocation (LoA) were analysed for all 61 agencies concerning 2017 (LoA_{17}). LoAs dating to the first year of the strategy-period (LoA_0) could, by definition, only be collected for agencies with strategies (having a known year "0").

The LoAs were analysed with the following variables: main aims, aims, performance-indicators, and assignments. The sum of these variables constituted a 'total steering load'. Agencies with strategies had a total steering load of 1397 in LoA_0, which increased to 2010 in LoA_{17}. Table 7 lists these values as mean per agency.

Table 7 Steering instruments in letters of allocation

Steering instruments	LoA_0 mean per agency (agencies with strategy)	LoA17 mean per agency (agencies with strategy)	LoA_{17} mean per agency (agencies without strategy)
Main Aims	3,4	3	2.8
Aims	19,8	22,3	13.1
Performance indicators	13,4	11,1	7.5
Assignments	10,9	12,7	5.2
SUM	47,5	49,1	28.6

Steering loads in LoAs are known to change over time (Kjærvik and Askim 2015). In our case, for the dureation we measured, we found an increase in the use of aims and assignments for agencies with strategies. When counting steering loads (LoA_{17}) for agencies without strategies, they had substantially less steering loads than agencies with strategies on all measurements. The overall picture: steering loads keep mostly stable in our time span. Agencies with strategies have noteworthy more steering loads than others. The average distance in time between LoA_0 and LoA_{17} was two years.

There was a significant variation in the use of performance indicators when agencies were separated into distinct policy areas (figure 6) with Environment and climate oriented agencies being most steered by their parent ministry with on average 23.6 performance indicators. There was also a notable variation in the use of steering instruments by organisation type. Headquarter-organisations (also being on average largest) got much more steering loads than national organisations (Figure 7).

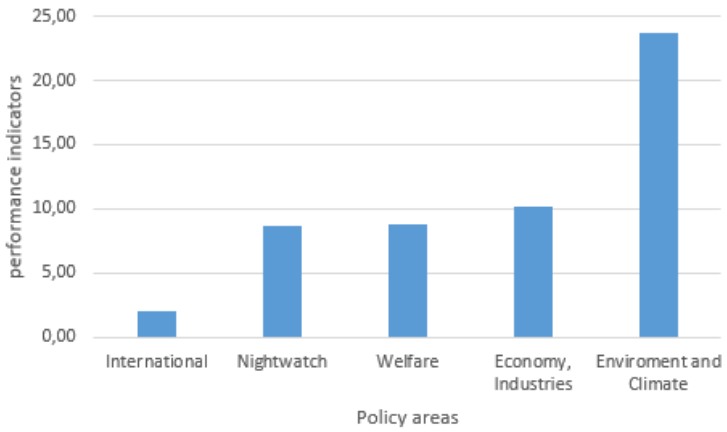

Figure 6 Use of Performance Indicators (2017) by policy area

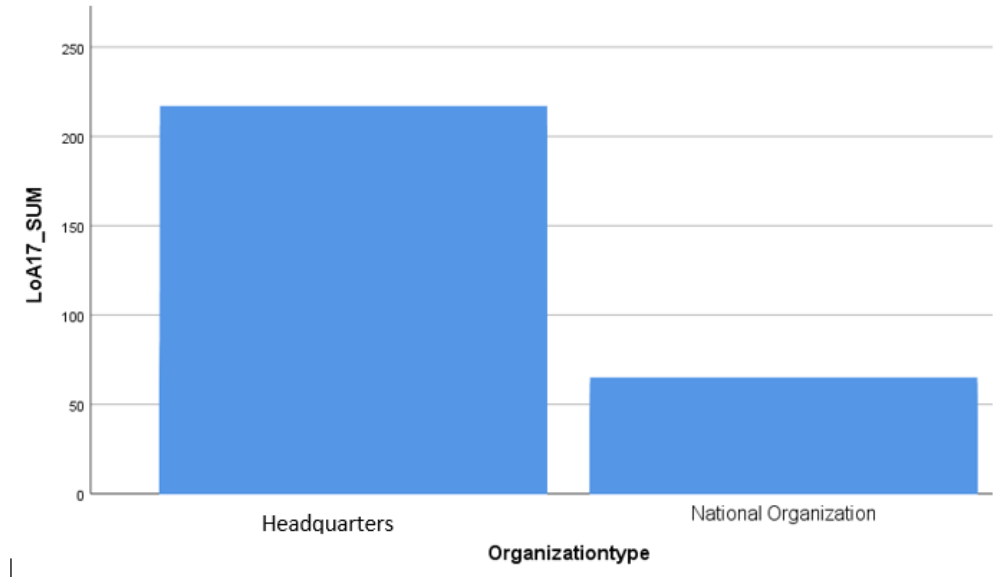

Figure 7 Sum steering load (2017) by organisation type

We checked how different ministries use steering loads in letters of allocation (figure 8). The variation was substantial, from on average 17 total steering loads per agency (ministry of culture) to over 99 in the ministry of climate and Environment.

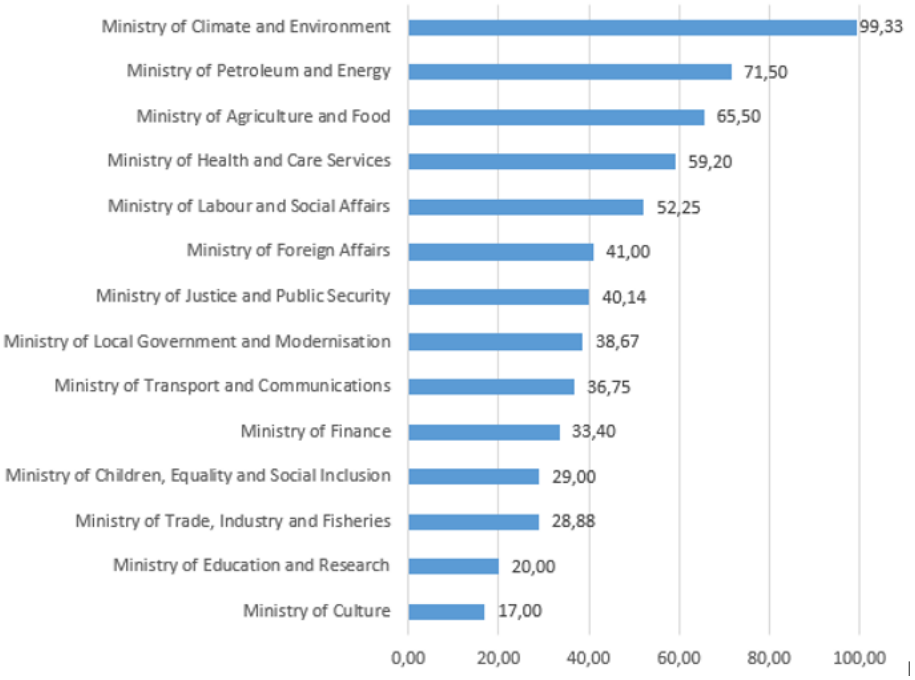

Figure 8 Mean steering load in letters of allocation (2017), by ministries

4.2.3 Variables measuring strategic management

Of the 61 agencies in the population, 41 agencies (68%) had institution-wide strategies with strategic periods including the year 2017. Sub-institutional or theme-oriented (e.g. "media strategy" or "competency development strategy") were not included in this study. The average timespan of the strategies was 5.3 years, the longest being 10 years and the shortest 3 years. Agencies *with* strategies had all sizes, but agencies *without* strategies were all among the small agencies (figure 9).

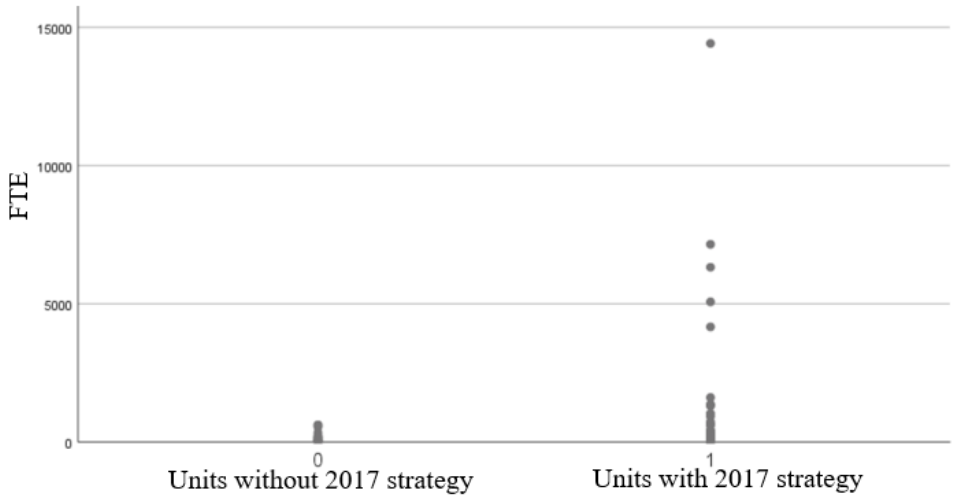

Figure 9 Size (FTE) vs use of strategy

Being either the headquarters or a national organisation had implications for the probability of having a strategy (table 8). 88% of national organisations had strategies pertaining to 2017, whereas only 52% of headquarters had.

Table 8 Organisation type role on which agencies have a strategy

	Has strategy	Has not strategy	Sum
Headquarter (of a larger organization)	19	17	36
National organization (a contained unit)	22	3	25
Sum	41	20	61

In table 9, we list a number of differences we found between agencies with and without strategy.

Table 9 Differences between agencies having and not having strategies

	With strategy	Without strategy
Size (FTE)	All sizes (mean 1076 FTE, St,Dev. 2492, n=41)	Small (mean 174, St.Dev. 194, n=20)
Policy-area	Most: Economy, Industries and International	Least: Nightwatch Welfare
Ministries	Most: Agriculture and Food (100%) Culture (100%) Finance (100%) Foreign Affairs (100%) Petroleum and Energy (100%)	Least: Education and research (33%) Defence (0%)
Type of organisation	Equal probability for being Headquarter or National organisation	Strong probability for being a national organisation (85%) rather than headquarter (15%)
Letters of allocation	More aims (13% over mean%), Assignments (19% over mean) and Performance Indicators (10% over mean)	Fewer aims (32% under mean), Assignments (49% under mean) and performance indicators (25% under mean)

Steering instruments in strategies

The strategies contained in all 1229 aims. Some strategies were concise, with very few strategic aims, others were voluminous with as many as 117 expressed aims (The Norwegian Coastal Administration – NCA). We analysed the use of SWOT-like instruments, defining of values and vision with binary dummy-variables. Half of the agencies with a strategy used vision, but only a third employed environmental analysis, like SWOT (Table 10).

Table 10 Steering instruments in strategies

	Total	Mean per agency	Median	St.Dev.	Min.	Max.
Aims	1229	30	25	19.9	6	117
	Use of SWOT-like analysis 14 agencies (34 %)					
	Use of vision 24 agencies (58 %)					
	Use of values 21 agencies (51 %)					

Values defined in the strategy document

Twenty-one agencies defined their values. In his seminal article on the doctrinal content of new public management, Hood (1991) described three clusters of administrative values: Sigma, Theta, and Lambda-type of values. We analysed government agencies' strategies with Hoods value-criteria.

Table 11 Administrative values analysed

Type	Explanation of type	N	% of values	In how many agencies
Sigma-type	Keep it lean and purposeful	20	28%	16
Theta-type	Keep it honest and fair	37	51%	19
Lambda-type	Keep it robust and resilient	15	21%	12

Some examples of values used in various agencies, sorted by type:

Sigma-type values: solution-oriented, professional, customer oriented

Theta-type values: clear, generous, integrity

Lambda-type values: knowledgeable, quality, competency

Visions defined in the strategy document

Twenty-four agencies (59% of agencies with strategies) defined their 'vision' – using the word "vision" to define it. Desmidt, Prinzie, and Decramer (2011) note that the expressions 'mission statement, statement of purpose, vision statement and value statement' often are overlapping and interchangeable. We found the agencies' visions to closely match Desmidt et al.'s definition of 'mission', being an expression that 'articulates an organisation's distinct and enduring purpose..' (Desmidt, Prinzie, and Decramer 2011, 471).

A vision-statement can have various functions as part of a strategy document. For instance, in an empirical study of the use of change processes in UK health care, Pettigrew, Ferlie, and McKee (1992) found that a shared broad vision was "a more effective lever for change than a detailed blueprint" (Ferlie 2002, 280).

Vision statements thus have both a self-defining function and a distinct function when organisations face changes. We did not examine whether the agencies in question were in change processes but analysed the content of vision statements with the logic of a production value chain and found that 71% of vision-statements focused on outcomes, the rest on outputs.

Strategic stance in aims

We examined to which tendency each aim in the strategies expressed a strategic stance (Boyne and Walker 2004).

Table 12 Strategic stance as strategic aims

Strategic stance	Per cent of aims	Number of aims
Prospector-stance	6.5 %	80
Defender-stance	92.8%	1141
Reactor-stance	0.7%	8

Bear in mind these are measured in agencies *with* strategies. In chapter 5, we raise the question of whether the agencies without strategies express a consistent reactor-stance, which would alter the balance between the three stances.

Some examples:

Prospector stance aims "Create new services" (NAV - Directorate of Labour)

"Facilitate digital dialogue between health personnel in new areas" (Directorate for e-health).

Defender stance aims "Strengthen work on improving and streamlining work processes to optimise core business and increase the quality of support and management processes" (Norwegian Labour Inspection Authority).

Reactor stance aims "Important guidelines for the agency's tasks are ... guidelines in the form of laws, regulations and other priorities in the administration." (Norwegian Accreditation).

Fourteen agencies (34%) had *only* defender-stance strategic aims (figure 10). The five agencies with most prospector stance oriented aims had between 19% and 33% prospector-aims

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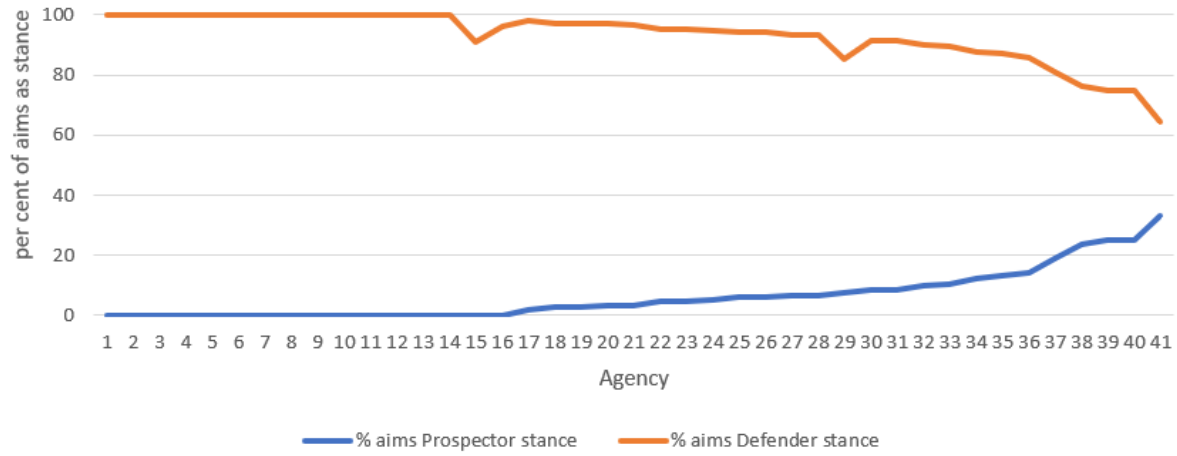

Figure 10 Widespread use of strategic defender stance

4.2.4 Size and type

NSD categorised organisations according to organisation type – either headquarters, heading up a larger decentralised organisation or a national organisation – where the organisation itself represents the whole national organisation.

Agencies varied in size depending on organisation type. Most 'national organisations' were among the smaller agencies, and most 'headquarters' were in the mid and large size groups (Figure 11). Organisation type and size signifies differences in organisational complexity, and we will discuss the implications of this in more detail later.

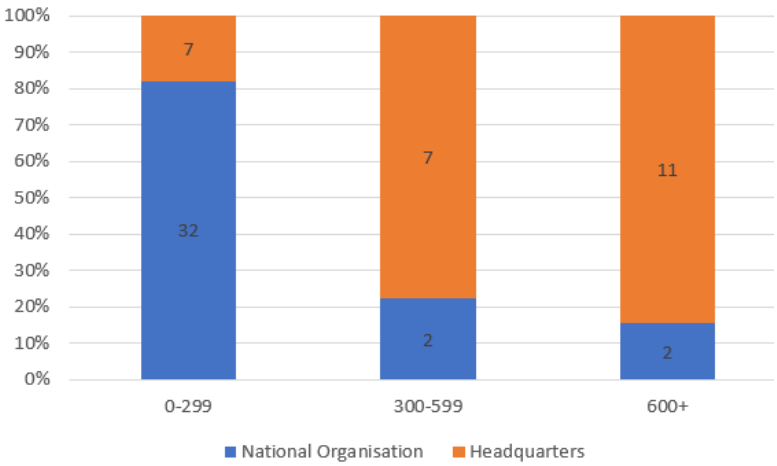

Figure 11 Distribution of organisationtype by size (FTE)

4.2.5 Strategy and focus

We examined how aims in strategies focused on various elements of a production value chain. We found an uneven distribution of strategic aims focusing on either input factors, activities and processes, outputs (products and services) and outcomes (for agency users or society).

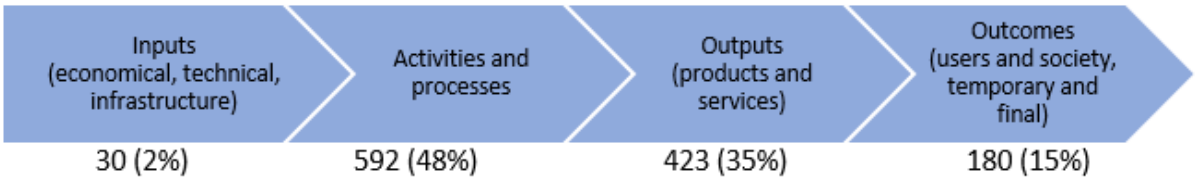

Figure 12 Aims in strategies, by production value chain

In total, aims focusing on activities and processes were most prevalent with 48% of the aims, whereas aims focusing on inputs were most seldom (2%). We analysed how the use of aims was used in agencies of different sizes (figure 13). Large agencies were more focused on process aims than the average agency, whereas medium-sized agencies were more focused on output aims than the average agency. Split by policy areas (figure 14) we mention two findings: Nightwatch-agencies scored highest among agencies on process aims, and welfare-agencies were well above average on outcome aims.

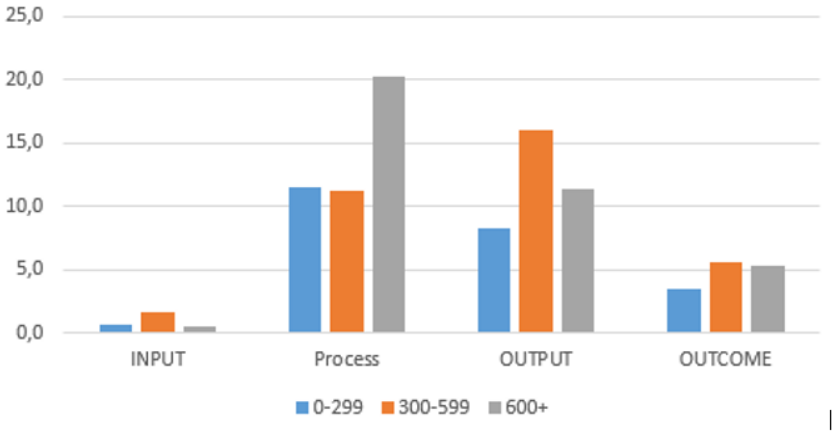

Figure 13 Value chain focus by agency size (FTE)

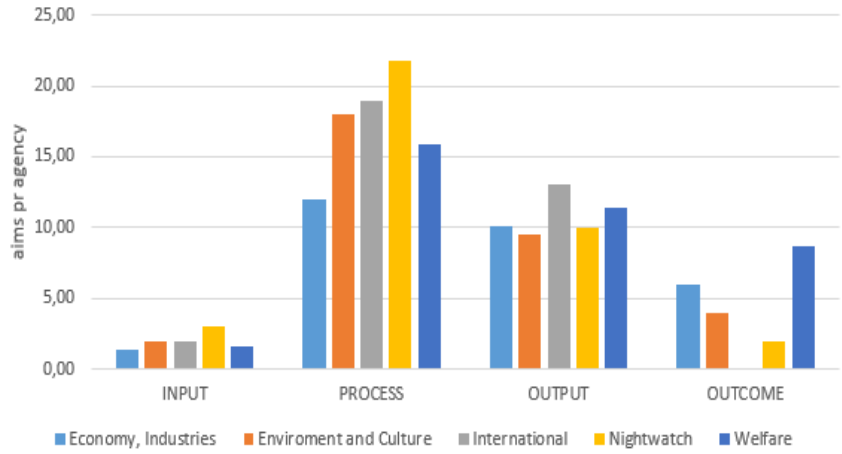

Figure 14 Focus on production value chain by policy areas

4.2.6 Annual Reports

All 61 agencies had annual reports for 2017. We examined the annual reports of the 41 agencies having strategies because we wanted to find

- how many aims from the strategic documents were re-found in the agencies' annual reports
- if the annual reports at all referred to the agencies' strategy

All annual reports reported on performance-indicators and the aims from the letter of allocations, in addition to financial reporting. Doing that is a formal requirement of the annual report in governmental agencies. However, reporting on the status of strategic aims is not.

Table 13 Annual report: References to strategic aims

	Yes		No	
	n	%	n	%
A general reference to the agencies' strategy	32	78%	9	22%
Reference to one or more specific strategic aims	15	37%	26	63%

An important variable in this study is to which degree the annual reports followed up on strategic aims detailed in the agencies' strategy. In the group which did report on specific aims (15 agencies), there was a big difference in how many of their aims they addressed (figure 15).

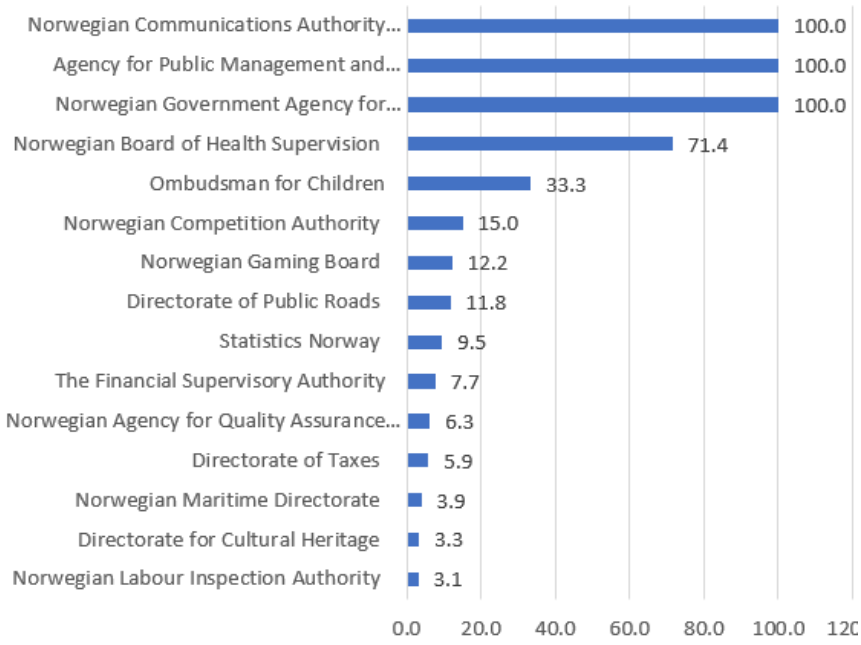

Figure 15 Percent of strategic aims re-found in agencies' annual report

4.2.7 Findings on the main hypotheses

The hypotheses were set as bivariate assumptions, and our findings are presented in table 14. H1, H2, H4 and H5 all had significance scores higher than p=0.05. Even if these scores are mostly used for determining whether the data can be used predictive for a larger population, which we will not do, they also tell us that the data do not correlate with any impressive statistical strength. Conclusion: none of our hypotheses were supported.

Table 14 Results on hypotheses (ρ = Pearson correlation coefficient)

H #	Hypothesis	ρ	Sig 2-tailed	N
H_1	(A1) Steering load in LoA before strategy development is negatively correlated with (B1) Steering load in Strategy.	0.127	0.429	41
H_2	(A1) Steering load in LoA before strategy development is negatively correlated with (B2) Strat Prospector Stance.	-0.003	0.986	41
H_3	(B1) Steering load in Strategy is positively correlated with (C1) Strategic aims in the annual report.	-.342	0.029	41
H_4	(B2) Strat Prospector Stance is positively correlated with (C1) Strategic aims in Annual report.	0.048	0.766	41
H_5	(A2) Steering load in LoA 2017 is negatively correlated with (C1) Strategic aims in the Annual report.	-0.07	0.663	41

As shown in table 14, H_3 is the only hypothesis with any statistical significance (0,029 is significant at the 0.05 level - 2-tailed). However, the relationship is negative, not positive as hypothesised, and although -0.342 is a significant relationship, it is not a strong (negative) corroboration – which the scatterplot (Figure 16) for these data shows. One reason for this is that only 15 of 41 agencies with strategy refer to specific strategic aims in their annual report. Twenty-six agencies, therefore, have a "0" score on that variable.

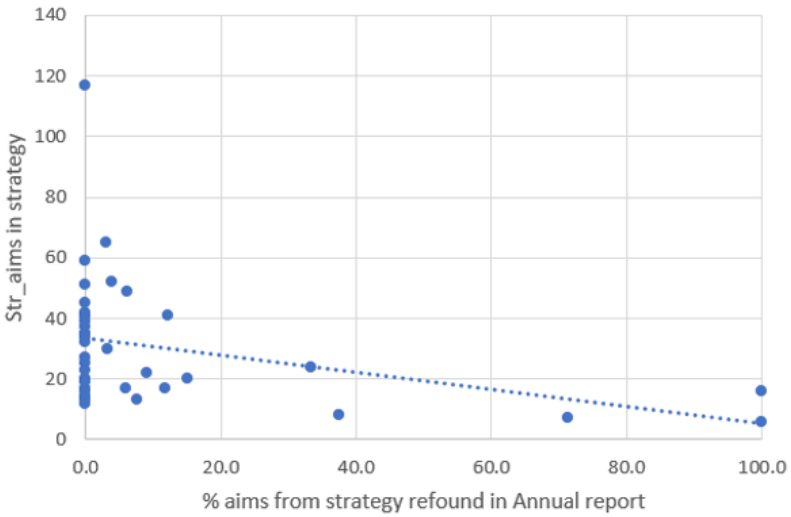

Figure 16 Simple scatter plot of strategic aims and aims found in annual report (%)

4.2.8 A closer look at possible non-linear relationships

Whereas results from linear correlation-testing were not impressive, other patterns emerged when we divided agencies into three separate groups and examined the means of each group. For each hypothesis, we split the agencies by low, medium or high groups on one of the variables.

For H_1 and H_2: A1 Steering load in LoA before strategy development: low, medium and high.

For H_3: B1 Steering load in Strategy: low, medium and high.

For H_4: B2 Strat Prospector Stance: low, medium and high.

For H_5: A2 Steering load in LoA 2017: low, medium and high.

The chart in Figure 17 shows correlation testing when the first variable in the hypothesis was split into three equally sized groups (low, medium, high).

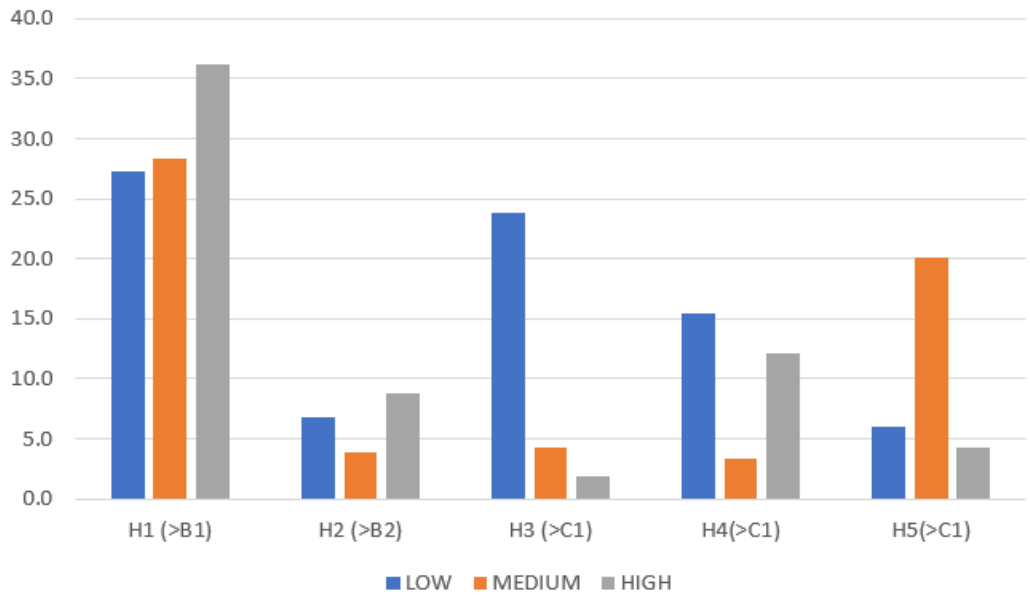

Figure 17 Initial nonlinear testing of hypotheses. H_1 – H_5.

(Low: N=14, Medium: N= 14, High: N= 13)

H_1: Higher LoA steering load gives higher strategic steering load

H_2: Medium-group of LoA steering load (mean) has lower use of prospector stance than other groups

H_3: Low-group of steering load in strategy has much higher findings of use of strategic aims in the annual report (as also shown in the linear correlation analysis)

H_4: Mid-group of prospector-stance has much lower use of strategy in the annual report

H_5: Mid-group of LoA steering load has much higher use of strategy in the annual report

Testing non-linear correlation by dividing the dependent variable into three subgroups and calculating the mean of the independent variable – as we did above, can at best show some tendencies. The real test of whether there is a consistent non-linear relationship is best done by testing the data with quadratic regression analysis. We did this with H_2, H_4 and H_5, and although this approach reduced the standard error and mean square error and increased the explained variance (R^2), we did not gain much in ways of statistical significance. We are therefore left with the tendency shown by our initial approach.

4.3 Multivariate analysis - PLS-SEM-analysis

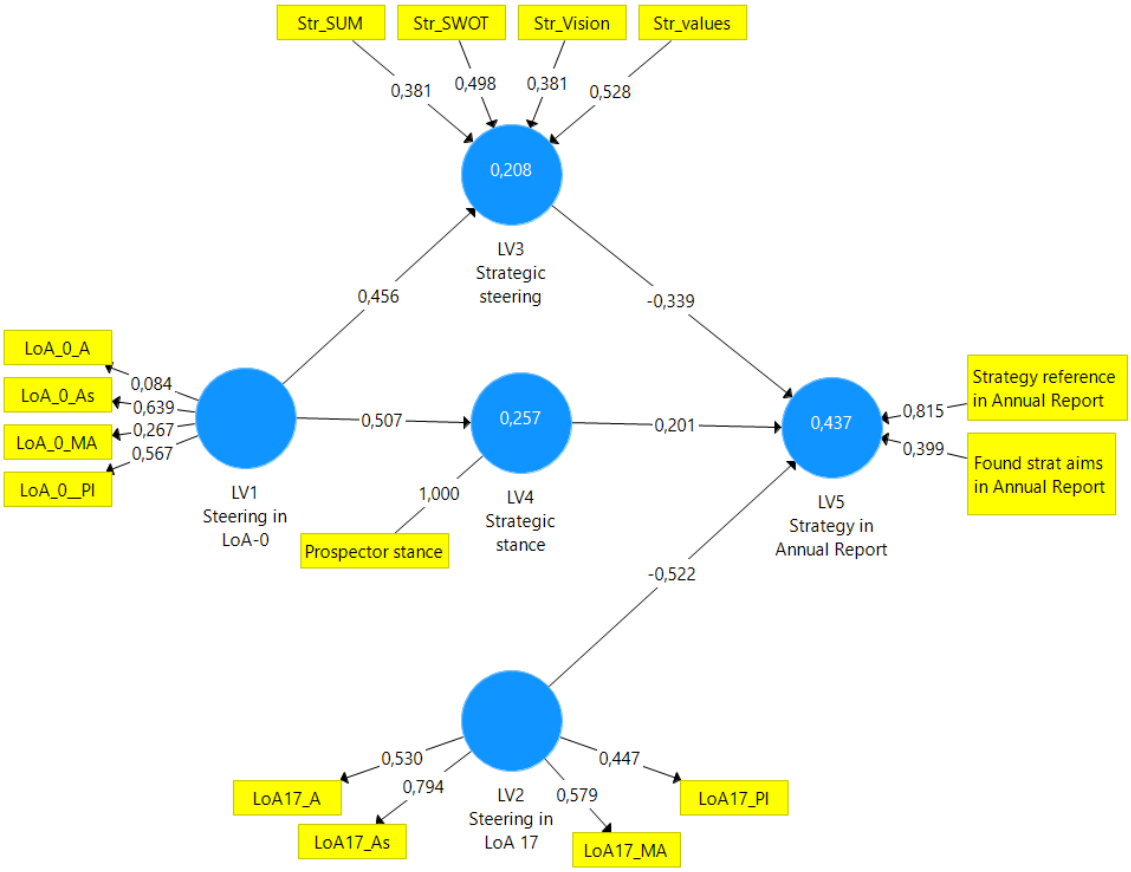

Figure 18 Results from PLS-SEM analysis

We used the computer program SmartPLS 3.2.8.

- Calculations were done with “Consistent PLS-Algorithm.”. (Explained below).
- Weighing Scheme: “Path”
- Iterations “300.”
- Stop-Criterion “(10^x): 7.”
- Missing values: Mean replacement
- Weighing: none set
- Bootstrapping: not run.

Consistent PLS-algorithm (PLSc) performs a correction of reflective constructs' correlations to make results consistent with a factor-model, thus making path coefficients, inter-construct correlations, and indicator loadings more consistent (Dijkstra and Henseler 2015). It is therefore considered an improvement of the original PLS-algorithm when using reflective constructs.

Dijkstra and Henseler (2015) also show that PLSc has advantages when using non-normally distributed data, which is very relevant in our case.

4.3.1 A short explanation of results from the PLS-SEM-analysis.

The blue circles are our latent variables (constructs). The yellow squares are observed variables. Formative measurement models are marked with an arrow from the indicator to the construct. Reflective measurement models are marked with an arrow from the construct to the indicator. **Factor Loadings**. The numbers between the observed variables and the latent variables are *factor loadings* – resulting from factor analysis of the relationship between the observed variables.

Explained variance, R^2. The value in the blue circles (latent variables) represents R^2, which is the explained variance for that construct. The exogenous latent variables thus explain 43.7 % of the variance in the latent variable "LV5 Strategy in Annual Report." By definition only endogenous latent variables can be explained and can thus have R^2 value, exogenous variables explain, but are not explained.

Regression coefficients. The lines between latent variables have arrowheads indicating the presumed direction of causality. The number on these lines is the standardised regression coefficients and indicates whether the causal model is supported.

We did not run the data in a bootstrap-function to obtain T-values to gain statistical significance, because we are not examining a sample for prediction to a population.

Missing data: missing data in a PLS-SEM analysis can give distortions (must never be over 15%). In this analysis, we only used data from agencies with a strategy, and we based our data input on observed variables in documents, and thus had 0 % missing data, We, therefore, did not have any need for replacement of missing data.

Indicator and construct reliability. Reflective indicator loadings should be > 0,5, which is valid for five of the eight reflective indicators. If we were to find an ideal predictive model, indicators with loadings less than 0.5 should be deleted. Doing so would render our model with several single-indicator variables, which is not ideal. Instead, we leave the low-scoring indicators to show both strong and weak indicators. This choice also affects the results of construct reliability and validity. However, Rho_A scores well above the demand of 0,7 in 4 out of 5 constructs (see Table 15). Measurements for composite reliability, however, fares worse: only the measure for strategic stance is above the recommended threshold of 0.7 -

because it is a single-item indicator (cf argument in chapter 3.11). The measure for Average Variance Extracted (AVE) has the same problem. In sum: the results for indicator reliability are mixed, pointing to a conclusion that the model and our data is not well suited for a predictive purpose. However, using PLS-SEM as an analytical tool on our population-wide data does reveal some insights to be discussed in our next chapter.

Table 15 Analysis of construct reliability and validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Steering in LoA 17	0,686	0,719	0,684	0,361
Steering in LoA-0	0,538	0,551	0,432	0,202
Strategic stance	1,000	1,000	1,000	1,000
Strategic steering		1,000		
Strategy in Annual Report		1,000		

4.3.2 Checking for multicollinearity

As in multiple regression independent variables should be examined for possible multicollinearity. We did this with the latent variables in Table 1. All results came out statistically insignificant and with low correlation: variance inflation factors (VIF) were all below 2.5 (Allison 2012). Therefore multicollinearity was not a problem.

4.3.3 Interpreting regression coefficients from our PLS-SEM-analysis

The results of the PLS-SEM analysis show more promise than the hypothesis testing, among others due to the use of latent variables which include a broader array of indicator variables.

The binary indicators in LV5 and LV3 were excluded in the hypothesis testing and seem to play an important role in estimating the regression coefficients. Also, the choice of using a reflective or formative measurement model makes a significant difference – not reflected in simple correlation-testing of selected indicator variables.

The regression coefficients (table 16) represent an estimated change in LV5 with a one unit change in the independent variable when all other variables are held constant. A strength of PLS-SEM is being able to calculate regression coefficients with latent variables consisting of several indicators. The negative coefficients indicate that higher steering loads in both strategy and LoAs reduce LV5 (strategy found in the annual report). On the other hand, stronger strategic prospector stance (LV4) increases LV5.

Regression coefficients changed when replacing LV4 with different strategic stances:

Table 16 Regression coefficient for LV4 as different strategic stances

	LV4 as "P"	LV4 as "D"	LV4 as "R"
LV3 –> LV5	-0.339	-0.334	-0.297
LV4 –> LV5	0.201	0.188	-0.070
LV2 –> LV5	-0.522	-0.499	-0.452
LV1 –> LV4	0.507	0.451	0.421

When LV4 is set to "Prospector", R^2 for LV5 is = 0.437: 43.7% of the variation in LV5 is explained.

Changing LV4-values from prospector stance to defender stance does not change the coefficients much. The most significant change comes when using strategic reactor stance values. The reason for this is that the variable for reactor stance, being seldom found, has little variation, most often 0.

4.3.4 Interpreting factor loadings

PLS-SEM performs exploratory factor analysis (EFA) for the measurement models, calculating both outer loadings (used for reflective models) and outer weights (used for formative models). Factor loadings and weights indicate how much a change in a latent variable can be attributed to the indicator and is thus an expression of the relationship between a latent variable and an indicator.

In LV1 (LoA_0) values were moderate, with 'assignments' and 'performance indicators' being strongest. In LV2 (LoA_{17}) values were higher, with 'assignments' as high as 0.79. LV3 (steering load in strategy) had surprising results – with the binary values of 'SWOT' and 'values' carrying the heaviest loads. LV4 was not applicable, having just one indicator, thus gaining 1.0 in weight, and last LV5 (strategy in annual report) surprisingly showing that the binary indicator showing whether the strategy was referred to at all carried most of the explanation of variance (0.815).

5 Discussion

In this chapter, we draw on insights gained in our chapters on theory, methods and results to discuss our research question: "How does performance management interact with strategic management in government agencies?" We approach answers to this by discussing a few chosen issues.

5.1 Failing hypotheses and new insights

All government agencies in our study use performance management, but with different levels of detail and intensity. We also found variations in the steering load in the letters of allocation depending on

- the size of agency (both measured in FTE and budget),
- type of agency (headquarter or national organisation),
- policy-areas
- parent ministry

Being interesting findings in themselves, the indicators of performance management were our independent variables, and our main pursuit was not explaining variations in the independent variables, but in how independent variables interact with our dependent variables. In other words, our research question directs our focus to the interpretation of how performance management interacts with our dependent variables which relate to strategic management and the reporting of results in the annual reports.

Our main hypotheses did not fare well. The hypotheses were framed as assumed positive or negative linear correlations between a set of chosen indicator variables. Four out of five hypotheses were untenable in the sense they had low statistical significance and low correlation coefficients.

Only H_3 showed some promise with significance at less than 0.05 and the correlation coefficient at -.34. However, the correlation was negative rather than positive as assumed. We hypothesised in H_3 that 'Steering load in Strategy' is positively correlated with 'Strategic aims in the annual report'. We assumed that a higher level of specificity in the agencies steering would imply higher attention to the strategy's function as a steering instrument, thus creating a greater chance of the aims also being a part of the annual report. The data show that the opposite was the case - with per cent of references to strategic aims in annual reports being fewer the more aims an organisation had. Also, measured with another indicator: a general reference to the agency's strategy was somewhat less probable the more detailed the strategic aims were spelled out. A

possible explanation is that strategies with a high level of detail in strategic aims, sooner become irrelevant, and letters of allocation substitute them faster as a detail-oriented steering instrument. As a steering instrument, strategies with many strategic aims have a stronger resemblance to letters of allocation, and might, therefore, be sidelined by letters of allocation faster than strategies with fewer and more overarching aims. That would explain the negative correlation in H_3. This interpretation also links to perspectives from strategic schools of thought. A planning school type strategy, which Johnsen (2015) found was extensively used in Norwegian public organisations, might, in cases with many specific aims, become irrelevant after few years due to changes in the environment, including the ministries' governing of the agency. As detailed aims over time become irrelevant, a transfer to a more learning school type of approach with more attention to letters of allocation might contribute to the agency not having an active focus on the established strategic plan for the rest of the strategy period – and consequentially not referring to it in the annual report. The strategic plan thus becomes what Llewellyn and Tappin (2003) called "dormant documents".

To sum up findings in our hypotheses: in examining all central administrative government agencies, we did not find support for a consistent positive *linear* effect between use of performance management and use of strategic management.

Dividing the exogenous (independent) variables in our model into three separate groups, low, medium and high, and applying that to our hypotheses, we found weak indications of non-linear correlations. Regarding H_5, we found that agencies which were exposed to a medium-level amount of steering loads were substantially more probably to report on their strategic aims in their annual report, than both those who had high and low steering load demands.

Headquarters are hubs in national networks and thus face more organisational complexity than national organisations, which often have only one location. A relevant question is whether headquarters, often having more employees and thus higher organisational complexity, also enjoy more organisational autonomy, which again might translate into more active use of strategic management. We found that HQs were on average much larger than national organisations, had much more chance of having a strategy and their strategies had more strategic aims – all indicative of more complex organisations. However, whereas 78% of agencies which were national organisations referred to their strategy in their annual report, only 36% of agencies which were headquarters did so. Two possible intepretations emerge. If we hold on to our interpretation of the reference to strategy in annual reports being indicative of strategies being an active part of the agency management, larger agencies more often have strategies but seem to have a less active relationship to them. Another interpretation could be

that larger organisations might have stronger internal processes were processes linked to strategic management are situated. Reporting in these processes in their annual report might, therefore, seem unneccesary.

5.2 Agencies' strategic autonomy

An underlying question throughout the thesis has been the question of the autonomy of the government agency. We have found the kind of limitations which restrains the autonomy and flexibility of public organisations which Nutt and Backoff call "mandates and obligations" (Nutt and Backoff 1993) in our letters of allocation. Aims focusing on input, activity, output and outcomes are given the agency in addition to performance indicators and demands on reporting and budget discipline. Interpreted with Bozeman's "publicness grid" (Bozeman et al. 2013), the kind of agencies we are dealing with have low economic authority, but very high political authority. That reflects the same sentiment as Boyne and Walker express in one of their hypothesis of strategic stance: "H_4 The higher an organisation sits in a governmental hierarchy, the less likely it is to be a reactor" (Boyne and Walker 2004, 246). A strategic reactor stance is understood as antithetical to high political authority. We have found that central administrative agencies have almost no strategic aims which we understood as being a reactor stance. So far, we follow Boyne and Walker.

20 out of 61 agencies did not have strategies, and among the 41 with strategies, nine did not mention it in their annual report, and 26 did not mention any of their strategic goals. Given the level of external control many government agencies face through letters of allocation, and the low level of follow-up many had on their strategy in their annual reports, one might question whether central administrative agencies enjoy the level of political autonomy presumed by Bozeman. On the other hand, we found in the above discussion on 'steering load, ministries and agency sizes' a possible clue to bottom-up development of performance targets (i.e. when an agency gets to suggest – or define - which aims and performance indicators the parent ministry will direct them to have). If this holds true, there might be a higher degree of political autonomy in play than we can detect in our analysis of the agency's strategies.

The question of agency autonomy is also linked to trends in public administration reforms. New public management has "operational and strategic management" as one of its hallmarks (Ferlie 2002) and an agency having a "degree of administrative autonomy" is one of three characteristics of NPM-orientated public agencies (Hansen and Ferlie 2014). The other two are "degree of performance-based budgets" and "degree of market-like competition". We have tracked performance-based management and seen that it is widely used. Performance-based

budgeting is a different perspective which we have not mapped, but we will argue that our selected agencies do not experience market-like competition. Given these three dimensions of how much an agency has conformed to NPM-ideals, we estimate that our central administrative agencies only to a limited degree have adopted NPM-inspired developments (mainly in terms of performance management).

Ferlie (2002) describes the ideal type of (traditional) public management agency as having constitutional and judicial tasks (we have intepreted that as pointed out in letters of allocation and other binding texts), vertically integrated organisations and strong lines of upward accountability (seen in annual reports), inward-facing when it comes to user focus and low change orientation. Many of our agencies seem to conform better to this set of descriptors than those of new public management-agencies, seen for instance in the fact that most strategic aims were focused on process/activity and outputs, not outcomes. Agencies according to a public management ideal may have low strategic autonomy, but still use strategic management (Ongaro and Ferlie 2019), consistent with our findings.

5.3 To have or not to have…strategy.

We will now take a closer look at differences between agencies which develop and use strategies and those who do not. As noted, 41 out of 61 agencies had strategies. Table 9 lists some of their differences. There are interdependencies between the measurements in Table 9, but an interesting picture emerges. Agencies which are small, being in certain policy-areas, having certain parent ministries, are much less prone to having strategies than others. They are also exposed to less detailed performance management in terms of aims, performance indicators and assignments. Less pressure on performance management from ministries could signify more strategic autonomy, but that is not evident in the development and use of strategies. A stronger impediment to strategy development, therefore, is probably the agencies size. Smaller agencies both have fewer resources to devote to strategy-making, less organisational complexity, less diversity in product-delivery and are a weaker counterpart to the authority of the ministry. Not having a strategy is therefore probably a result of a variety of reasons, tradition and size being some of them.

Why then do government agencies have strategies? Influence from new public management ideals might contribute on a large scale to government agencies wanting to develop strategies. Ongaro and Ferlie's (2019) study of the use of strategic management in non-NPM settings is of use here, as we judge this level of government agency-hierarchy being low-NPM. They cite

Hansen and Ferlie (2014) defining NPM-oriented public agencies as "endowed with some significant autonomy to operate", facing "incentivization, notably performance related budgets" and are "marketized, facing market led competition". Johnsen (2007) describes performance management in public agencies as an expression of "competition without markets" in agencies in a certain hierarchy. We interpret the findings in our agencies as pointing to "low" on all three of these dimensions even if two-thirds of them have developed an institutional strategy. From our data, we found that all larger agencies had a strategy, and those with higher organisational complexity were more probable to have it. That also correlated with more detailed performance management in the letters of allocation. That gives an overall indication that agencies having higher task complexity are more likely to develop institutional strategies out of necessity, more than mechanically aligning to NPM-ideals.

5.4 Strategic stance, lack of strategy and autonomy

One of the most robust and consistent findings in our study was that a substantial majority of strategic aims in the agencies' strategy documents were oriented as strategic defender stance. 92.8% of aims were deemed taking a defender stance, whereas 6.5% were prospector stance and only 0.7% reactor stance.

First, we consider the question of how to interpret the lack of having a strategy. We will avoid conjuring arguments from data in absentia, but since agencies are indeed required to have strategies (Ministry of Finance 2015, 29), we will at least attempt to interpret the absence. Second, we look at results from our PLS-SEM analysis. Third, we reflect on the widespread use of defender stance.

Ferlie and Ongaro (2015, 172) note that absence of strategy can "itself be a strategic option that may be adopted both in deliberate and emergent fashion". Inkpen and Choudhury discuss if organisations can have an implicit strategy – without for instance having any strategy documents (Inkpen and Choudhury 1995). They concede this might be, but argue, "A firm's strategy is the result of a series of activities and managerial decisions that coalesce into a pattern and logic." These processes, they argue, may be absent even if an onlooker may read pattern and logic into the organisation's actions. They describe three levels of analysis for understanding an observed absence of strategy: (1) conditions that preclude or do not encourage the presence of strategy, (2) the researcher's ideological framework that may interfere with the recognition of strategy void and (3) organisational and environmental contextual factors associated with strategy absence (Inkpen and Choudhury 1995, 313). In our case, the first level may have opposing forces: official prescriptions on agency management states that agencies

shall have (long term) strategies which clarifies "the most important crossroads and changes that need to be done in the coming years" (The Norwegian Government Agency for Financial Management 2010, 3). Simultaneously, active steering of the agency through letters of allocation might easily be perceived by an agency as reducing the strategic autonomy. Our findings that all agencies without strategies were small is also an expression of organisational factors in Inkpen and Choudhury's third level of analysis. Given small organisations (both budget and FTE) have fewer resources, less organisational complexity, fewer responsibilities, and the noted shortage of strategic autonomy, it is fair to interpret a lack of strategy as being content with the ministries performance management as adequate steering instrument.

Can that be interpreted as an expression of reactor stance? Ferlie and Ongaro (2015, 172) note that absence of strategy can "itself be a strategic option that may be adopted both in deliberate and emergent fashion". In that case, the actual level of reactor stance in government agencies could be substantially higher than we have reported. Other agencies referred to their letters of allocation and in some cases their 'agency directive' instead of a developed strategy. To the degree these agencies were not tightly involved in setting the aims and performance indicators in their letters of allocation, it is hard to interpret such findings as anything but a reactive strategic stance. "A reactor would have no consistent, substantive stance because it would only adjust its strategy when forced to do so by environmental pressures. It is, therefore, likely to have its formal stance imposed through the actions of external agencies such as regulators" (Boyne and Walker 2004, 240). The level of reactor-stance is therefore in reality considerably higher than the 0,7% reported. Twenty agencies are lacking strategies for 2017, being 33% of the 61 agencies.

Inkpen and Choudhry's article also raises another issue – that of whether strategic management can be in place even if we have not found a strategy document for the organisation. That is indeed true for those agencies where we found strategies on separate issues or departments of the organisation, but not for the whole organisation. However, we concur with Inkpen and Choudhry that strategic voids are possible – and one need not read strategic intent into patterns when the organisation itself does not do so explicitly.

Does a strategic reactor stance indicate a lack of strategic autonomy? Boyne and Walker did not draw this inference. On the contrary, they argue that a reactor strategy may be a "deliberate and positive choice in a public-sector environment that values responsiveness to the shifting demands of external stakeholders" (Boyne and Walker 2004, 240).

Ongaro and Ferlie (2019) hold that the age of an agency is significant as patterns of consistent decisions may take time to form. They distinguished between agencies established before and

after 2000. We did not find this separation to have an effect on whether an agency had a strategy or not in Norway (agencies founded before 2000: 10 without and 24 with strategies, agencies founded after 2000: 9 agencies without and 17 with strategies).

Our PLS-SEM analysis showed that having a prospector stance strengthens the prediction of reference to strategy in the annual report, which we interpret as having an active attitude to using the strategy as a steering instrument. The regression coefficient of 0.201 is not overwhelming, but it is positive. The opposite is true for both strategic aims and steering load in LoA17. Their regression coefficients with strategy-reference as depending variable were negative (-0.522 and -0.339) indicating a negative prediction. That is understandable concerning strategic aims – it makes sense that reporting on strategies which has very many aims are simplified in annual reports. It is easier to report on a few main trends. However, the findings of a negative relation for steering loads were more surprising. It does seem like ministries which exercise high-level steering loads might contribute to lesser active use of strategic aims in the agency. Another explanation is of course that ministries interfere more with detailed steering when agencies are lacking strategic management - because they need it.

The PLS-SEM factor analysis indicates that the 'number of assignments' and 'reference to strategy' both plays a significant role in explaining the relationship between LoA_{17} and strategy in the annual report. Steering with specific assignments can be understood as a direct short-circuit of the performance management– a kind of ministerial "micro-management". It is therefore of interest that this indicator-variable contributes so strongly to the variation in how active an agency holds its strategy.

Finally, we comment on our finding that strategic aims are almost the overwhelming presence of defender-stance aims.

The widespread defender stance (in all agencies) can be interpreted in various ways. We believe it expresses the agencies' identity as organisations having a monopoly on their turf, without any incitaments or in many cases possibilities of developing new approaches to new 'markets'. To a large degree, the agencies focus on "core activities", "efficiency of provision" and "stable service priorities" in accordance with the three questions defining the strategic defender stance (Table 3). Taken on face value, the strategy documents express that agencies at this level of government do not need to "redefine service priorities", "identify new modes of delivery" or "search for new opportunities" as stated in the prospector-stance questions. This gives an overall impression of limited strategic autonomy – other processes than their strategic management defines the agencies' boundaries.

5.5 Agency identity: values, visions and aims

In the 41 agencies having strategies, we have already noted that twenty-one agencies defined their values and 24 stated their vision. Sixteen had both. Dividing values into Hoods administrative value-categories, we saw Theta-type values (honest and fair) being most predominant and we also found that a majority of visions were outcome-oriented. Values and visions are steering instruments with a less "mechanical" application than we have understood aims to be. Values and visions are "normative terms" for an organisation (Pollitt and Bouckaert 2017). Bozeman's differentiation of seven kinds of values in public organisations is also an interesting lens to use (Bozeman 2007). By far the most used type of values were 'values related to behaviour by public employees' (like professionalism, honesty and ethical standards) which categorised 29 of the total 73 values. Others values were related to 'public management and its surroundings' (16), 'relations between employees and users/citizens' (13), 'intra-organisational values' (9), 'relations between politicians and bureaucrats' (4), and 'public contribution to society' (2). Thus, values and visions are an expression of a desire to express that the agency has relevance and is useful for the society and its citizens. That finding is in contrast to our findings on strategic aims, focused mostly on intra-agency activities and processes and second on the agencies outputs. Only 15% of aims focused on outcomes (figure 9). This analysis conforms with Brysons (Bryson 2015, 515) definition of strategic planning shaping and guiding what an organisation is, what it does, and why it does it.

5.6 Did we connect the dots in the strategic management framework?

We initially framed our study with Poister et al.'s (2010) framework for strategic management. We interpreted letters of allocation as an organisational determinant, strategy documents as expressions of strategy content and the agencies' annual reports as reflecting the organisation's outcomes. We were unable to find evidence that the relationship between these entities could be easily described as a direct influence. Our hypotheses, which were based on such linear correlating thinking, were thoroughly put to rest. However, our PLS-SEM analysis, which included more indicators, found more solid relationships.

We also challenged the unexplained variation using control variables like policy area, agency size, ministry belonging and more. In all, we found substantial variations. These findings point to a realisation that the interconnectedness between determinants (as external performance management in our case), strategic management and outcomes is a complex one, depending a great deal on internal and external organisational factors. We referred to Dusenbury's (2000)

understanding of performance management and strategic management forming a circle – a continuous process of governing-for-results. This circle is a simple and harmonious metaphor. We have found that if kept, this metaphor hides an abundance of empirical complexity. Our study traced a line of evidence in search of connectedness in the framework for strategic management. Our attempts to map a few other (control) variables show there is a need to study determinants with broader perspectives if one is to explain variations in the use of strategic management better. In our theory chapter, we noted for example that Ongaro and Ferlie (Ferlie and Ongaro 2015) used several theoretical perspectives when describing determinants, among them the different administrative traditions described by Peters and Painter (2010) – which are much larger entities than we have studied.

5.7 Strategic and performance management as complementary approaches

We have described some aspects of how ministries execute performance management in their agencies. Aims, performance indicators and specific assignments are given in letters of allocation and are all monitored in a continuous dialogue between ministry and agency. The annual result is then presented in the agency's annual report. However, strategies are developed within the agency, with varying degrees of ongoing clarification and permissions given by the superior ministry. Such processes are internal and are mainly hidden from the public. In some cases, it is clear that an external consultancy agency has participated or even facilitated the strategy development process. The level of strategic autonomy, therefore, is hard to deduct only from studying the strategy documents.

Our aim in this thesis has been to study how these distinctly different processes interact – or even how one influences the other. Our data has revealed that the interactions are neither obvious nor simple. We also raise the question of whether they are can be construed as one-sided – opening the possibility of mutual influence.

We found that strategies have multiyear perspectives (mean 5.3 years) whereas letters of allocation are annual. There was a notable variance in how strategies were structured. Some defined just a few overarching strategic goals, vision and values, others were much more elaborate and detailed long term plans, very much in accordance to "the planning school" (Mintzberg, Ahlstrand, and Lampel 2009) approach of doing strategy. Mintzberg et al. described the "fallacies of strategic planning" being concerning predetermination, detachment and formalisation. The more strategies are long term, detailed planning-oriented and inflexible, the less useful they are, especially if the environment is unstable. We have already noted Johnsen's counter-argument that in certain respects some kinds of public agencies define their

future organisational environment (Johnsen 2015). Here an interesting intersection between performance management and strategic management comes into play. As separate instruments of steering, they have different advantages and disadvantages. The identity-defining ontological function of strategies we saw in Bryson's definition (Bryson 2011) which comes into play through values, vision and overarching strategic aims, has a different role than any detailed planning-school like strategy. The annual letters of allocation, on the other hand, can counter-balance the adverse effects of too detailed long-term strategic planning. Where a strategic plan, which is, for instance, four years old, might contain detailed aims and planning that has become out-of-date, the annual letters can be a means to correct such problems until a more updated strategy can be developed. The identity-shaping aspect of the strategy might still be relevant despite age, and through the ongoing agency-ministry steering-dialogue, this aspect might prove to be influential in choosing which annual performance-indicators are set for the agency. Our research-question and use of PLS-SEM could easily be read as having a one-sided arrow: How does performance management *influence* strategic management in government agencies? Based on our findings it seems more to the point to ask how performance management and strategic management *interact* with each other. Our empirical investigation found some evidence to support the claim that performance management interacts with strategic management. The interactions are, however, not easily mapped and we found other variables having a significant influence on our data.

With the limitations set by the kind of data we gathered (mostly quantitative), we could not find evidence that certain ways of using performance management in letters of allocation limits the strategic space of government agencies. The strategic space is already, as we have noted, by definition rather limited. Agencies receiving high amounts of steering from ministries also had more, not less, strategic aims, suggesting other factors being in play, such as policy area, agency size or the specific characteristic of the agency's duties. More performance management in the sense of 'more steering load' does not dampen the agencies will to set strategic aims for themselves.

6 Conclusion and suggestions on further research

In exploratory research like ours, much is unknown beforehand. Our research question was "How does performance management interact with strategic management in government agencies?" Examining the data, we found that many agencies, but not all, use strategies. We analysed the ministerial letters of allocation and the agencies' strategies and annual reports. The tentative hypotheses, which were based on simple linear correlations, were rejected. However, by using Partial Least Squares Structural Equation Modelling (PLS-SEM) in a broader analysis of relations between latent variables based on a number of indicator variables, we found that high use of steering loads in terms of aims and performance indicators given by a ministry to an agency, might decrease an active use of strategy in the agency. Strategic management seems to have a stronger identity forming function, while performance management dominates aim-setting in agencies. Strategies which have too detailed sims, seem to have a tendency to become dormant documents. We also found that several other variables, like agency size, organisational complexity, and policy area have a strong influence on both performance management and strategic management. In sum, this study has had some contribution to the understanding of how certain determinants influence strategic management in government agencies.

The methodological approach had certain limitations. We included the whole population of government agencies at a central administrative level. This extensive approach limited the possibility of doing an in-depth analysis of each agency, including interviews. Only using document analysis increased the possibility of interpreting the data from an outside perspective, and thereby opening for possible misinterpretation. Therefore, we limited the use of qualitative data to an analysis of strategic aims and strategic stance. The rest of our data was quantitative. That gave us an interesting overview, but the need to limit the number of variables decreased the in-depth perspective.

Suggestions for further research

An explorative study like this raised many questions we could not explore further within the limits of this study. A closer enquiry into how the two-way influence between intra-organisational strategic management and ministerial performance management seems justified. Along the same lines: does an agencies' strategy have an indirect effect on the content of the letters of allocation via the agencies continual steering dialogue with its ministry? Do long term strategies and short-term performance management supplement each other harmoniously or do

they constitute organisational goal ambiguity (Andrews and Mostafa 2017) with strategic aims and organisational autonomy as the losing part? Larger questions also loom: how do wider contextual variables exert influence on strategic management and performance management in government agencies? Do ideals like those from new public management and cultural ideals form how political and bureaucratic levels of government interact and how political-societal expectations shape how strategic management is performed in government agencies?

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Appendix I List of agencies in study.

(*= agencies with strategy)

Norwegian name	English name
Arbeids- og velferdsdirektoratet*	NAV- Directorate of Labour*
Direktoratet for arbeidstilsynet*	Norwegian Labour Inspection Authority*
Pensjonstrygden for sjømenn	Pension Insurance for Seamen
Petroleumstilsynet	Petroleum Safety Authority Norway
Barne-, ungdoms- og familiedirektoratet*	Norwegian Directorate for Children, Youth and Family Affairs*
Barneombudet*	Ombudsman for Children*
Forbrukerombudet	The Consumer Authority
Direktoratet for økonomistyring*	Norwegian Government Agency for Financial Management*
Finanstilsynet*	The Financial Supervisory Authority*
Skattedirektoratet*	Directorate of Taxes*
Statistisk sentralbyrå*	Statistics Norway*
Tolldirektoratet*	Directorate of Norwegian Customs *
Nasjonal sikkerhetsmyndighet	Norwegian National Security Authority (NoNSA)
Bioteknologirådet	The Norwegian Biotechnology Advisory Board
Direktoratet for e-helse*	Directorate for e-health*
Helsedirektoratet sentralt*	Norwegian Directorate of Health*
Statens helsetilsyn*	Norwegian Board of Health Supervision *
Statens legemiddelverk*	Norwegian Medicines Agency*
Direktoratet for samfunnssikkerhet og beredskap	Directorate for Civil Protection and Emergency Planning
Integrerings- og mangfoldsdirektoratet*	Directorate of Integration and Diversity*
Kontoret for voldsoffererstatning	Norwegian Criminal Injuries Compensation Authority
Kriminalomsorgsdirektoratet*	Norwegian Directorate for Correctional Services*
Politidirektoratet*	National Police Directorate*
Sekretariatet for konfliktrådene	National Mediation Service
Utlendingsdirektoratet*	Norwegian Directorate of Immigration*
Miljødirektoratet*	Norwegian Environment Agency*
Norsk Polarinstitutt	Norwegian Polar Institute
Riksantikvaren - direktoratet for kulturminneforvaltning*	Directorate for Cultural Heritage
Datatilsynet*	Data Inspectorate
Departementenes sikkerhets- og serviceorganisasjon	Norwegian Government Security and Service Organisation (G.S.S.O)
Direktoratet for byggkvalitet	Directorate for building quality
Direktoratet for forvaltning og IKT*	Agency for Public Management and eGovernment (DIFI)*
Husbanken – hovedkontoret*	Norwegian State Housing Bank*
Valgdirektoratet	Election Directorate
Lotteri- og stiftelsestilsynet*	Norwegian Gaming Board*
Medietilsynet*	Norwegian Media Authority *
Norsk kulturråd*	Arts Council Norway *
Foreldreutvalget for grunnopplæringen	he National Parents' Committee for Primary and Secondary Education
Nasjonalt organ for kvalitet i utdanningen*	Norwegian Agency for Quality Assurance in Education *
Utdanningsdirektoratet	The Norwegian Directorate for Education and Training

Landbruksdirektoratet*	Norwegian Agriculture Agency *
Mattilsynet – hovedkontoret*	Norwegian Food Safety Authority*
Brønnøysundregistrene	Brønnøysund Register Centre
Det norske justervesen*	Norwegian Metrology Service *
Direktoratet for mineralforvaltning med Bergmesteren for Svalbard.	The Directorate of Mining with the Commissioner of Mines at Svalbard
Fiskeridirektoratet*	Directorate of Fisheries *
Konkurransetilsynet*	Norwegian Competition Authority *
Norsk akkreditering*	Norwegian Accreditation *
Patentstyret (Styret for det industrielle rettsvern)*	Norwegian Patent Office *
Sjøfartsdirektoratet*	Norwegian Maritime Directorate*
Norges vassdrags- og energidirektorat*	Norwegian Water Resources and Energy Directorate*
Oljedirektoratet*	Norwegian Petroleum Directorate*
Jernbanedirektoratet	Norwegian Railway Directorate
Kystverket hovedkontoret*	The Norwegian Coastal Administration – NCA*
Luftfartstilsynet	Civil Aviation Authority – Norway
Nasjonal kommunikasjonsmyndighet*	Norwegian Communications Authority (Nkom)*
Statens havarikommisjon for transport*	Accident Investigation Board Norway *
Statens jernbanetilsyn	Norwegian Railway Inspectorate
Vegdirektoratet*	Directorate of Public Roads *
Vegtilsynet	Road Supervisory Authority
Direktoratet for utviklingssamarbeid*	Norwegian Agency for Development Cooperation*