



# What happened with the leviathan of the Public Sector?

The challenges of vertical coordination in regional  
public organizations and its effect on public value

Sara Davoudi



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Faculty of Arts and Social Sciences

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Business Administration

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*To my Parents*



## **Abstract**

Putting the capability to satisfy citizens' needs at the heart of public organizations, public value has been argued to be the ultimate goal of public sector programs and policies. However, the contemporary public sector's complex and multilevel structures has led to limited information processing between the various levels within organizations. Such vertical fragmentation has created issues in vertical coordination, hampering the efficiency and effectiveness of the regional public sector. Addressing these issues, the aim of this thesis is twofold. First, this thesis aims to describe and explain public organizations' coordination challenges. Second, this thesis aims to elaborate on the implications of this explanation to create a deeper understanding of how these challenges affect public organizations' ability to perform public service that adds to public value. In order to reach the aim, quantitative and qualitative methods have been used. The empirical base consists of two questionnaire studies (930 public transport users in the first and 921 in the second), as well as a comprehensive interview and documentation study with 11 respondents representing 11 Regional Public Transport Authorities and their respective policy documents. In this thesis, I argue that vertical specialization has brought conditions where each level interprets the regulations and policy documents based on their own individual preconditions such as individual ideologies and self-interests, as well as attitudes and relationships between different divisions. As such, these preconditions may influence the outcome of rules and regulations that were created with the purpose of reforming the public sector. Further, the thesis outlines how the same individual precondition may act as a structural filter on the flow of information about citizens' needs, influencing the distribution of information upstream in the organization. If we neglect these conditions and focus only on the rules and regulations, we risk missing aspects that influence the organization and its coordination outcome and, in turn, the citizen.

**Key words:** Coordination, Citizen Needs, Organizational Learning, Public Reforms, Public Value, Regional Public Organizations



## Preface

When I started this journey seven years ago, I had my first experience with the public sector that did not include me as a service user. I expected the public sphere to be dull and viscous, but I was wrong. The complex structures, with political and administrative structures working together but apart, and the contradictory goals and collaborations among public, private, and quasi-autonomous organizations in advanced systems – all of which are required to deliver public services – were much more complex than my experiences from private sector management. What I did not know then was that deficiencies of the coordination could have negative effect on service users. The title of this thesis refers to these deficiencies. The continued existence of the leviathan<sup>1</sup> and continued efforts needed to tame the leviathan of the public sector.

As an industrial PhD student, I had the chance to view it all from the inside. I was an insider. It took me a long time and many discussions before I could walk away from my long-learned efficiency focus from the private sector. Alongside my colleagues who had long experience within the sector, I explored the field and it soon became clear that I wanted to contribute to the regional public organizations in their work towards increased public value.

When I started my data collection I had the support of my manager at the Public Transport Authority (RPTA). As such, I was presented as “one of them” and was accepted. In retrospect, I understand that this acceptance was crucial for this thesis. As an insider, the respondents, and my colleagues all over the country, gave me time to understand their organizations, gave me stories that were only shared inside the organization, and raised problems that did not officially exist. The transparency that these people offered me not only gave me a much clearer understanding of the problem, but also made me genuinely concerned to contribute.

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<sup>1</sup> *Leviathan* is a 17<sup>th</sup> century book on political philosophy by Thomas Hobbes that has been one of the most influential studies between state and society. Since *Leviathan*, the phrase *taming leviathan* has been used in many different political contexts. These studies refer to the state as this great beast that must be broken down and de-centralized in order for it to lose its sovereign power.

However, straddling the position of a civil servant as well as a PhD student was not easy. In the first years I found myself trapped in the context without the ability to theorize. I was so close to my data that I now feel that I was protecting it, which created friction in the discussions with my academic colleagues and co-writers. I was too close to the data and they were too far away. It was a struggle within me, but also with “them”. Me struggling to view the data with theoretical glasses and leaving my role as the guardian of the data, and me struggling to bring forth the important but small details of the data and protecting it from “them” as theorists. However, I believe that this struggle between me as an insider and them as outsiders was fruitful and that this tension created a deeper understanding of the issue and resulted in better discussions setting the DNA, the identity, of this thesis. Such dialectical relationship between explanation and understanding have been present throughout the whole research process, coloring the coding, analysis, and interpretation of the data, as well as my view as a researcher. At the start of my research journey, I had clear tendencies towards a positivistic view on the truth. However, being placed in such close connection to the context created an understanding and acceptance for varying standards and individual justifications, which led to me appreciating objectivity as well as subjectivity.

After two and a half years, my contract ended as an industrial PhD student and I was transferred to the university facilities, continuing my studies as a traditional PhD student. This world was different from the public office that I had left. Discussions and views were different and soon after I became physically separated from my studied context it became easier to view the data and the studied context as a researcher rather than a consultant. Almost two years of parental leave further increased my distance to the data and it became easier to view the theoretical issue connected to the data. The details that I fought to include in the discussions did not fade away during this journey, but they found their place and fueled the discussion rather than leading it, creating a thesis that includes the reality with its details, however they are raised and analyzed at a higher degree of abstraction.

## **Acknowledgments**

At the time I am writing this, I have just been given the “thumbs up” to proceed with the publication of this thesis. I am shocked and grateful and it feels like the end of a roller-coaster full of surprises. I am grateful to so many people that made this possible, supervisors, coworkers, administrators, friends and family. This thesis would not have been possible without all of you.

I want to start with showing my greatest appreciation to someone who has bared with me during all these years, someone who has pushed and supported me, someone who made me crazy mad, but also contributed to many laughs. Someone that made me a researcher. Thank you, Mikael Johnson, for believing in me from the first day we met and supporting me in all my academic steps during these years. Thank you for being an amazing supervisor and coworker. Thank you for being my friend. Special thanks are also due to my supervisor Martin Grimberg Löfgren, whose knowledge, patience, and support have guided me in this process. Thank you for rooting for me and encouraging me to finalize this thesis. To Bo Enquist, thank you for your support and for sharing your knowledge during the first part of this process.

I would like to thank Region Värmland for the two and a half years as industrial PhD student that offered me insights that made this thesis possible. Special thanks to my friend and previous co-worker at Region Värmland, Mattias Landin (junior). I am also grateful to everyone I have worked with at Region Värmland. I also want to thank all the Regional Public Transport Authorities who contributed to this study.

To all my amazing co-workers at CTF, I am grateful for our CTF family, our talks and laughs. I miss you all during these home-office times. Special thanks to Pelle K. for all your encouragement. To Carolina, the guardian of the PhD students, thank you for all your support. Britt-Marie, I cannot thank you enough for all your help with all my administrative confusion – thanks for your support during tough times. A special thanks to my coworkers Jenny, Katrin, Alex, Claes, Andrey, and Johan for your friendship and amazing insights. A special thanks to Molly, my coworker and friend; thank you for everything that you do for me. To my friends, Sofia B., Kiana, Stina, Rebecka, Anna,

Bella, Germaine, Usman, Helena, Malin, and Rhys, thank you for being amazing people. Thank you for always supporting me and cheering me on. I'm grateful to have you in my life.

Sebastian, you have been cheering me on since the first day we met. You even created a hashtag for me, encouraging me on during the final year. You don't realize how much your cheering has motivated me. Thank you for all your support and love, thank you for being my best friend. I love you dearly.

To my beloved brother Behzad, thank you for loving me and supporting me. I miss you so much. Mom and Dad, you two are my inspiration, my solid ground, my backup. It doesn't matter what I have decided to do in life, you two have always supported me in every way. I don't know where I would have been without your support. I cannot describe how much I love you. This thesis is dedicated to you.

Espen, you are my anchor (in so many ways), you changed my life four years ago and I'm forever thankful for that. Thank you for lighting up my world with your smile. Mommy loves you forever  $\infty$ .

Karlstad, December 2020

**Sara Davoudi**

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## Appended papers

### **Study I:**

Högström, C., Davoudi, S., Löfgren, M., and Johnson, M. (2016). Relevant and preferred public service: A study of user experiences and value creation in public transport. *Public Management Review*, 18 (1) 65–90.

An earlier version of the paper was presented at the 22nd Nordic Academy of Management Conference, University of Iceland, Reykjavík, Iceland, 2013.

### **Study II:**

Davoudi, S., and Johnson, M. Organizational structure and learning in Public Transport

The paper was accepted to Public Management Research Conference (PMRC), Hawaii, 2020\*

### **Study III:**

Davoudi, S., Högström, C., Johnson, M., Löfgren, M. The life cycle of quality attributes: A study of how public transport quality attributes changes over time

The paper was accepted to International Research Society for Public Management Conference (IRSPM), Tampere, Finland, 2020\*

### **Study IV:**

Davoudi, S. and Johnson, M. Preconditions of Coordination in Regional Public Organizations

The paper was accepted to Public Management Research Conference (PMRC), Hawaii, 2020\*

\* Cancelled due to the COVID-19 crisis



# 1 Introduction

The contemporary public sector is complex and multi-level (Bache & Flinders, 2004; Bouckaert, et al., 2010). The complexity refers to the quasi-autonomous<sup>2</sup> relationships that have increased the level of vertical fragmentation (Skelcher, 1998), and multi-level refers to the interdependence of actors operating at different territorial levels (Marks, 1993). The territorial levels range from the political level at the top to the administrative level and, finally, to the quasi-autonomous agencies delivering the public service at the bottom. Such a structure results in a dispersion of authoritative decision making across the levels (Hooghe & Marks, 2001), where decision-making competencies and service delivery are shared among actors at different levels (Rhodes, 1981).

These complex and multi-level structures are responses to societal requirements of the efficiency problems that public sector have been facing. The assumption is that these structures will improve the efficiency and effectiveness of public service (Osborne, 2010; Boyne, 2002; Ferlie et al., 1996; Hood, 1995; Osborne & Gaebler, 1992). The idea is that public sector efficiency, as well as the legitimacy of the use of public funds, will increase by including private-sector managerial techniques of organizational resources to bridge effectiveness aspects of the service delivery. The separation of policy and service delivery leaves the local government in an administrative role; that is, it enables services delivery through quasi-autonomous agencies. As such, it leaves the quasi-autonomous agencies in charge of the ultimate purpose of public services, which is delivering the service and meeting citizens' needs.

It has been argued that the ultimate goal of public sector programs and policies is the creation of public value (Moore, 1995; Try & Radnor, 2007), and public value has been defined as the ability to satisfy citizen's needs (Moore, 1995; Moore, 2000; Spano, 2009). Accordingly, the present thesis rests on the notion that the goal of

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<sup>2</sup> Referring to different kinds of agencies, ranging from departmental agencies to publicly owned corporations to publicly financed private organizations.

public policy is to satisfy citizens' needs. However, these needs are not homogeneous or constant and the definition of needs and problems cannot be undertaken by professionals who provide standardized services for all citizens (Hartley, 2010). Rather, the citizens' demands regarding public services are changing rapidly. Citizens today are better informed and demanding than before (Fernandes & Pacheco, 2007). They no longer only require 24/7 service (Albury, 2005), but also the ability to address sustainability, justice, and resource efficiency (Talbot, 2005). As such, public sector success depends not only on reaching efficiency goals, but also on meeting citizen needs and reaching societal and environmental goals (Mokonyama & Venter, 2013). In order to do this, citizen needs must be explicitly considered (Mokonyama & Venter, 2013) and disseminated across the various levels within the vertical organization (Kohli & Jaworski, 1990).

However, the devolution of functions and specialization in the vertical organization has created territorial levels with non-overlapping roles. Such structures have created self-centered local authorities (Lodge & Gill 2011; Lægreid et al., 2014) that are mainly concerned with achieving their own specific objectives (Pollitt, 2003, Gregory, 2006) and have limited the information processing requirements across the territorial levels. As such, vertical fragmentation has created issues in vertical coordination (Lægreid et al., 2014), which has hampered the efficiency and effectiveness of the public sector (Christensen & Lægreid, 2006).

In 2017, the Children and Youth Psychology Department in a Swedish region received an additional grant to shorten the queues for psychological investigations for children (Kaliber, 2020). Private healthcare providers were procured according to specific assignments and agreements. The agreement stated how many times the healthcare provider would meet each child and how long the investigation should take, at a maximum. Most of the children who were investigated were diagnosed with one or multiple psychological diagnoses that led, among other things, to medication and transfer from public schools to schools for children with special needs. Psychologists reacted as more and more custodians reached out to the Children and Youth Psychology Department and requested a new investigation or a re-diagnosis of

their children. A psychologist claimed that 30–50 percent of these children that the healthcare provider has diagnosed were over-diagnosed or incorrectly diagnosed and reported the healthcare provider to the supervisory authority.

After a two-year investigation, the supervisory authority concluded that there were deficiencies in record-keeping and in the diagnostic documentation. The supervisory authority as well as the region argued that it is the healthcare provider's responsibility to ensure that the service is performed properly. The healthcare provider claimed that they had raised the issue that the time limit per investigation, stated in the agreement with the region, was insufficient and that the region did not agree on the matter and stated that the healthcare provider should adhere to the agreement. As such the healthcare provider instead claimed that it is the region that bears the responsibility. The Children and Youth Psychology Department are self-critical and the former manager of the department claim that it is the responsibility of the Children and Youth Psychology Department to ensure that the diagnosis is done correctly. Here – where this lack of a holistic view has affected young citizens and their families, where children have been wrongly medicated and lost valuable parts of their childhood, as well as intellectual and social development (Kaliber, 2020) – the leviathan of the public sector rears its ugly head.

Examples similar to the one above emphasizes that the core issue is not a fragmented structure with local self-centered authorities at different levels. Rather, it is the public value, or even in this case the human value, that is at stake, emphasizing the importance of vertical coordination and information processing in today's complex and multi-level public sector. As such, the various levels of a fragmented and complex public organization can be as well-intentioned as possible, aiming for public value, but the effect of the lack of communication is counterproductive for the public. Hence, in this thesis, it is the result of this counter-production that is referred to as the leviathan, not the activities or the intentions themselves.

## 1.1 Aim

The aim of this thesis is twofold. First, this thesis aims to describe and explain public organizations' coordination challenges. Second, this thesis aims to elaborate on the implications of this explanation to create a deeper understanding of how these challenges affect public organizations' ability to perform public service that adds to public value; that is, having the capability to satisfy citizen needs.

## 1.2 Summary and findings of the appended papers

This section summarizes the four appended papers. I have chosen to present this in the introduction in order to explain how the appended papers have contributed to the foundations needed to fulfil the aim of this thesis. Figure 1 illustrates the interrelations of the appended papers and how they help explain the citizen and organizational perspective when elaborating on public organizations' ability to perform public service that adds to public value. Figure 1 shows that organizations can accomplish a service that creates true public value when they have the preconditions (Paper IV) and the opportunity (Paper II) to learn from and adapt to the multi-dimensional (Paper I) and dynamic user needs (Paper III).

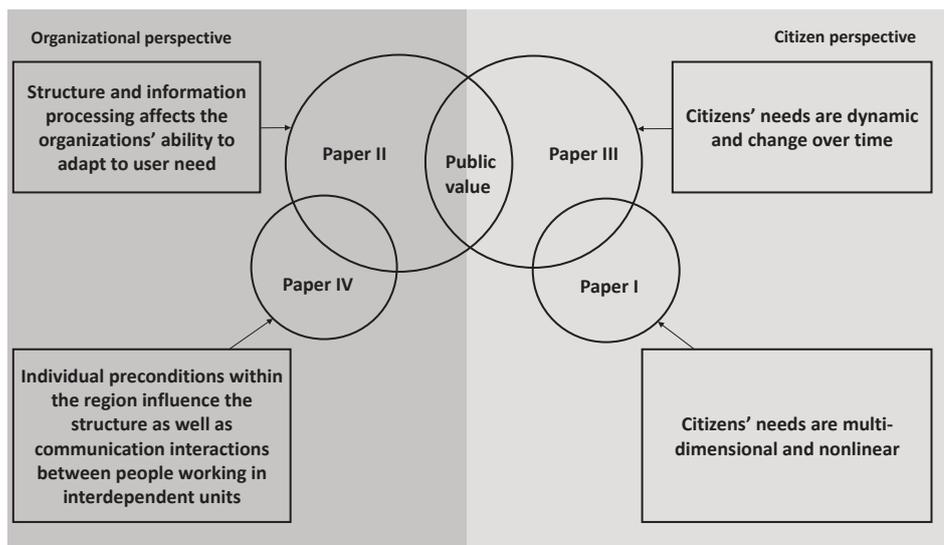


Figure 1. The interrelations and contributions of the appended papers.

### **1.2.1 Paper I**

This paper utilizes the Theory of Attractive Quality (Kano, 1984), described in Chapter 3.3, to show how achievement of service requirements can affect organizations' relevance and preference among users.

The paper focuses on how managers can, apart from lowering prices, implement value-creation strategies based on relevance or preference. With this approach, the paper provides a general and reflective understanding of strategies for facilitating users' value creation. To enhance service delivery governance and management, managers and scholars should adopt a holistic view of how organizational efforts affect users' experienced value. This theoretical understanding can help managers allocate and coordinate resources to make public transport more relevant to users and to reflect their preferences.

The findings suggest that to increase public transport's relevance, managers must first adopt an exploitative strategy that is focused on incremental improvements to eliminate reverse service attributes. Once such efforts have been successfully implemented, managers can continue to follow the exploitative approach to focus on one-dimensional attributes that increase consumer preference and attract users. However, public transport managers also have the strategic option of using some or all their resources in an explorative approach to develop radical innovations that will become must-have attributes. If successful, such an explorative, value-creation strategy could potentially make alternative modes of transportation that do not have these novel, must-have attributes irrelevant.

This paper was co-authored with Claes Högström (PhD candidate at the time), Dr. Martin Löfgren, and Dr. Mikael Johnson. I conducted the data collection for both the pre-study and the empirical study. The literature review and the main part of the actual writing of the paper were a joint effort with Högström, with whom I share the main authorship of this paper. The data analysis was a joint effort with Högström, Löfgren, and Johnson. Löfgren and Johnson also contributed to the writing.

### **1.2.2 Paper II**

This paper explores how organizational structure and information processing frame organizations' abilities to reach their objectives.

This paper illustrates how the combination of different organizational structures — mechanistic and organic — with personal or impersonal information mechanisms can affect perceived equivocality and uncertainty in the organization, and thus affect the need for information processing and, in turn, organizational learning.

Further, four distinct levels of organizational design are identified based on organizational structure and structural characteristics. The mechanistic impersonal structure represents a conventional formal, centralized organization, with a short-term focus on control and efficiency. The mechanistic personal structure adds personal mechanisms to allow open discussion in ambiguous situations. This paper suggests that adding personal characteristics to the mechanistic structure can, through exploitative reasoning, lead to different interpretations of questions and answers and (intentionally or unintentionally) lead to learning.

Similarly, organic personal structures represent a conventional emphasis on coordination and effectiveness. Through extensive vertical and horizontal information processing, this structure can lead to both exploitative and exploratory learning and result in present and future viability. Organizations with organic impersonal structures have formalized vertical connections executed through bureaucratic processes; however, their impersonal structure prevents open discussions and ambiguous situations.

This paper was designed and co-authored with Dr. Mikael Johnson. I conducted the main empirical work, the literature review, and the main part of the writing. The data analysis was a joint effort with Johnson. Johnson also contributed to the writing.

### **1.2.3 Paper III**

This paper builds on the same methodology as Paper I, which is the theory of attractive quality and Kano method to show that citizens' needs are dynamic and change over time.

The paper focuses on the nature of public services that, given long procurement times, often have low clockspeeds,<sup>3</sup> which influences the turbulence and magnitude of public transport. Using the results of the study in Paper I, compared to the results of an almost identical study conducted six years later, this paper shows that user preferences are changing at a higher speed than the public sector has the possibility to change its core service offerings.

Dividing the service into usefulness<sup>4</sup> and usability,<sup>5</sup> this paper provides a general and reflective understanding of how peripheral services can be used to reinforce the core service without changing the usefulness of the service. Such understanding makes it possible for public services to compensate for the shortcomings in their low clockspeed.

When understanding the users' changing needs and attributes that affect users perceived quality of the service, managers can focus on small changes that are possible within otherwise long-term procurements. Such changes will affect the usability of the service and make it easier for users to use the public service. As such, this paper argues that focusing on micro foundations within usability is likely to have a significant impact on the preference of the service.

This paper was designed and co-authored with Dr. Claes Högström, Dr. Mikael Johnson, and Dr. Martin Löfgren. I conducted the data collection for the pre-study and the empirical study, as well as the analysis for the Kano classifications. The data analysis and the actual writing was a joint effort between myself, Högström, Johnson, and Löfgren.

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<sup>3</sup> The rate or intensity at which the service changes in the industry.

<sup>4</sup> The core service.

<sup>5</sup> Complementary services that ease the use of the service.

### 1.2.4 Paper IV

This paper explores the link between the pre-conditions of coordination and the coordination mechanisms in regional public organizations. This is done by identifying the coordination instruments used between two administrative levels within regional public organizations and by identifying which pre-conditions affect coordination activities. The findings of this study extend the understanding of coordination regarding the instruments that regional public organizations use to coordinate the administrative levels and the preconditions that affect such coordination activities.

Table 1. *Preconditions of coordination mechanisms*

Coordination Mechanism	Influencing precondition
Modularity	The organization Coordination cost
Ongoing communication	Interaction potential Coordination cost
Tacit coordination	The organization Interaction potential Coordination cost

Our analysis of the coordination activities identified eight types of instruments. On an aggregated level, these instruments are explained by three generic coordination mechanisms: modularity, ongoing communication, and tacit coordination. We also identified four prerequisites for coordination in regional public organizations. On an aggregated dimension, these prerequisites are explained by pre-conditions regarding the organization, interaction potentials, and coordination cost.

The connection between various coordination mechanisms and their influencing precondition shown in Table 1 will be explained below. The findings indicate that *modularity* is influenced by members' ideologies and relationships (*the organization*) and the intention, interest, and personal perception of threats and possibilities (*coordination cost*) of key actors in the regional public organizations. The findings also

indicate that attitudes and relationships among different levels, perceived dependencies, and individual interests affect the use of coordination instruments. As such, *ongoing communication* mechanisms involving the use of interaction instruments to maintain and update common ground are influenced by *interaction potential* and *coordination costs*. Finally, the *tacit coordination* mechanism is influenced by members' ideologies and relationships (*the organization*), the attitudes and relationships between different divisions (*Interaction potential*), and the intention (*coordination cost*) with the service.

In sum, our results indicate that the regional public organization arranges work based on the members' ideologies regarding policy, history of informal contact, and information exchange between different actors (such as local politicians, public officials and officials), self-interests, and perceived dependency (Chan & Clegg, 2002; Alexander, 1995). This indicates that coordination mechanisms and coordination instruments in regional public organizations are based on the multiple actors' individual understandings of the organization and its services rather than on the coordination requirements.

This paper was designed and co-authored with Dr. Mikael Johnson. I conducted the main empirical work and the literature review. The writing and the data analysis were a joint effort with Johnson.

### **1.3 Structure of the thesis**

The thesis consists of the following four chapters.

Chapter 1 introduces the research field and the aim of the research. The introduction is followed by a summary of the findings in the appended papers.

Chapter 2 presents a review of relevant literature to provide the background and theoretical framework for the thesis. The chapter begins with a discussion on coordination, public reforms, coordination mechanisms, and coordination preconditions. Finally, the chapter ends with a review of theory related to information processes, internal structures, and organizational learning.

Chapter 3 describes the research approach and design of this thesis, as well as the methods used in each of the appended papers. The chapter ends with a reflection on the research process.

Chapter 4 concludes the thesis with a discussion addressing the aim of this thesis, managerial implications as well as opportunities for future research.

The appendices consist of two parts. The first part contains the appended papers forming the foundations of this thesis. The second part includes the questionnaires used in paper I and paper III as well as the interview guide used for paper II and IV.

## **2 Theoretical framework**

The intention of this chapter is to provide the reader with an understanding of the ideas and theories used within this thesis. This chapter begins with generally describing coordination to create a platform for discussion, then the various public sector reforms and their significance for public sector coordination are reviewed. Furthermore, the discussion is deepened in order to elaborate on coordination mechanisms and their preconditions. This will offer the reader an understanding of what coordination is, how public reforms affect coordination, which coordination mechanisms can be used, and which preconditions affect the choice of the various mechanisms. Finally, this chapter focus on information processing, organizational structure and learning. This explains why public organizations processes information, what significance the organizational form can have for the opportunity for information processing, and how information processing affects regional public organizations' capability for different types of learning.

### **2.1 Coordination**

In accordance with March and Simon (1958), I view organizations as systems of coordinated action among individuals and groups. As such, coordination ultimately takes place between individuals whose preferences, information, goals, interests, or knowledge differ (March & Simon, 1958).

Early coordination research (Fayol, 1949; Taylor, 1916; Jacoby, 1984; Chandler, 1962; Hickson et al., 1969; Thompson, 1967; Stover, 1970; Woodward, 1970) focused on ultimate organizing to coordinate efforts. More contemporary research on coordination assumes that activities must be coordinated in organizations regardless of the design, and therefore focus on activities for coordinating rather than ultimate organizing (Faraj & Xiao, 2006; Heath & Staudenmeyer, 2000; Ballard & Seibold, 2003; Malone & Crowston, 1990). This assumption is due to the belief that mobilization of resources and coordination of efforts is

required for the joint survival of an organization and its members (March & Simon, 1958).

The term “coordination” has been discussed within various research domains and scholars have suggested a variety of definitions. Therefore, the absence of a unanimous definition is not due to ignorance, but to the presence of too many different definitions (Alexander, 1995). Several definitions (Faraj & Xiao, 2006; Argote, 1982; Malone & Crowston, 1990) build on the assumption of goal-congruence among the levels and the desire to foresee each other’s actions. However, the vertical fragmentation of public sector, with levels of specific and nonoverlapping roles and functions, as well as often inconsistent goals, does not necessarily require the anticipation of other units’ action, nor does it justify or encourage parties to adapt their actions to those of other parties. Therefore, the goal-incongruence can affect the organizations’ perception of required integration among levels, affecting the efficiency and effectiveness of public services. Given the nature of contemporary public sector, this thesis rest on Quinn and Dutton’s definition of coordination: “Coordination is the process through which people arrange action in ways that they believe will enable them to accomplish their goals” (Quinn & Dutton, 2005, p. 36).

It has been argued that coordination success is equivalent to higher degree of integration (Puranam et al., 2012), and that integration is needed in order for organizations to sustain. As such, organizations need to solve their potential coordination problems in order to survive. However, given that the structure of public organizations – contrary to what has been argued by organizational theorists within the private sector – lack the bottom line that is required for public service survival (Choi & Chandler, 2015), coordination problems do not necessarily lead to cutoffs. Rather, a low degree of integration within public organizations leads to incoherent and poor public service affecting the service user, which highlights the importance of coordination in the public sector for public value.

## 2.2 Public sector reforms

Within the public sector, the discussion of coordination is often connected to the public reform revolving around public administration, new public management, and post-new public management,<sup>6</sup> described respectively by hierarchy, market (Williamson, 1973), and network (Bouckaert et al., 2010; Osborne, 2010; and Hartley, 2005; Ouchi, 1980; Adler, 2001;) (see Table 2). These three public reforms can be seen as responses toward the problems that the public sector is facing, including ideas, ideologies, values, and the culture of the public organizations section, rather than a solid set of ideas and tools.

*Table 2. The features of hierarchies, markets and networks (based on Bouckaert et al., 2010; Osborne, 2010; and Hartley, 2005)*

	<b>Hierarchy</b>	<b>Market</b>	<b>Network</b>
Base of interaction	Authority Central bureaucracy	Exchange and competition	Cooperation and solidarity
Resources needed	Authority Power	Bargaining Information Power	Mutual cooptation Trust
Control and evaluation	Top-down management Routines Surveillance Inspections	Price mechanism Self-interest Result evaluation (profit and losses) Efficiency focus	Shared values Common problem analyses Trust Informal evaluations
Role of policy- makers	Commanders	Commissioners of services	Leaders and interpreters
Role of public managers	Implementing political decisions without comment	Efficiency and market maximizers	Explorers
Role of the citizen	Client	Customer/User	Co-creator

<sup>6</sup> While I acknowledge various suggestions such as joined-up government, holistic governance, new public governance, networked governance, collaborative public management, and whole-of-government (Bogdanor, 2005; Hood, 2005; Six, 2005; Osborne, 2006; Hartley, 2005; Gregory 2003; Christensen and Lægheid, 2007a) made to label the second-generation reform, I use the term post-new public management (Christensen and Leag Reid, 2007b).

Public administration (PA) was developed in the late nineteenth century, with a focus on administering, setting rules and guidelines to ensure an equal treatment of citizens. Within the school of PA, the focus of government is on the direct delivery of services and it is assumed that the best organizational structure is the centralized bureaucracy. Because of its vertically integrated nature, hierarchy is central, with a focus upon vertical top-down management to ensure accountability for the use of public funding (Osborne, 2010).

Hierarchy focuses on legitimate power, together with systems of surveillance, evaluation, and direction that steer the organization. Downward communication of information, knowledge, and decision gives higher-level managers tools with which to ensure that the coordinated units will collaborate (Adler, 2001), making the organization centralized. Programs are implemented through top-down control mechanisms (Denhardt & Denhardt, 2000). Thus, bureaucracy has a central role in the policy-making and implementation of PA and is vertically integrated within government (Hood, 1995). The policy makers act as commanders creating legislation and assuming that it will be carried out by officials. The public managers carry out the work and implement political decisions without comment. Organizations using hierarchical mechanisms in their coordination may be efficient in a stable environment with routine tasks (e.g. Burns & Stalker, 1961). However, in uncertain times when there is high pressure on frequent decision-making, the hierarchy may become overloaded, creating bottle necks and affecting the quality of the decision making (Ouchi, 1980; Scott & Davis, 2015). Efficiency and rationality are seen as the most important virtues in public organizations, and citizens are viewed as clients who have little to say about the service. The fundamental goal of PA is to utilize management and policies to make the government function.

As a response to the problems with Weberian authority of PA, new public management (NPM) has swept the world over the last four decades, with public managers urged to “steer, not row” (Denhardt & Denhardt, 2000). With NPM, politicians have a strategic, goal-setting role and act as commissioners of services, while officials are supposed to be self-governing managers acting as efficiency and market

maximizers that are held accountable through performance arrangements and incentives (Pollitt & Bouckaert, 2004). As such, NPM tends to be a more managerial and market-oriented framework for public services delivery (Denhardt & Denhardt, 2000).

With the NPM reform, the development went from a hierarchical focus towards allowing market forces to govern service delivery. A key tenet of NPM is that private-sector managerial techniques of organizational resources are applied to the public sector issue and are assumed to be superior to PA's reliance on public policies. The market mechanism moves from the centralization and direct control of hierarchy to focus on market transactions, with the assumption that the application of these private-sector techniques will improve the efficiency of public service delivery (Osborne, 2010; Boyne, 2002; Ferlie et al., 1996; Hood, 1995; Osborne & Gaebler, 1992). Accordingly, the relationship between public agencies seems to be based on self-interest and involve transactions similar to those occurring in the marketplace. The price mechanism is used to coordinate competing parties. As such, markets, competition, and contracts are put at the center for resource allocation (Denhardt & Denhardt, 2000). Contracts specify in detail what each party should do and under what circumstances. However, as each party is only constrained to deliver what has been specified, the contract needs to specify who must deliver what under every possible state of nature; this creates uncertainty given that it is hard to predict the future. Due to such bounded rationality and opportunism, contracting will fail in uncertain environments (Ouchi, 1980).

With NPM, the massive government, the leviathan, turned into a facilitator of services that are delivered through a patchwork quilt (Rhodes, 2003) of public and private sector organizations. The key solution is intra-organizational processes and management. This emphasizes the economy and efficiency of the service units that produce public service. At the same time, it keeps politicians and top public officials away from operational matters, leaving them to concentrate on policy making (Pollitt & Bouckaert, 2004).

It can be argued that, with the NPM reform, the massive and viscous structure of PA became more flexible. However, with the “siloization”<sup>7</sup> (Gregory, 2006) of the public sector, which has been a result of NPM reforms, politicians have to some extent been decoupled from the external environment, focusing solely on their strategic-setting role. Osborne (2010) argued that public service research, as well as the managerial practices of public service, needs to capture and address the complexity of public service design, delivery, and management in the twenty-first century. Talbot (2005) argued that societies have become more complex. “One size fits all” delivery is no longer a sensible way of trying to provide public services and is not suited to a heterogeneous society that has rising expectations on tailored provision and service quality. In other words, public service organizations need to develop dynamic flexibility in order to respond to changes in the society, such as the behavior and needs of citizens that are changing and are difficult to predict.

Researchers have questioned the legitimacy of the NPM paradigm (Hood, 1995; Aberbach & Christensen, 2005; Fountain, 2001, etc.), arguing that its efficiency focus may undermine laws and rules, and jeopardize democratic principles. As a solution, post-NPM (Christensen & Lægreid 2007a, 2007b, 2010) has been suggested as a response to the inadequacies of PA’s focus on political and public policies, and NPM’s use of rational-choice theories and practices as means of public coordination. Rather than being about formalized collaboration, post-NPM generally seems to be more about working together in a pragmatic and intelligent way. This does not mean “loosely coupled” or anarchistic organizations; rather it displays a high degree of discipline through networks that provide a great regularity of relations and may in fact be more directive than market and bureaucratic mechanisms (Ouchi, 1980). This field is not based on contracts or surveillance, but rather on shared values, trust, and common problem analyses, as well as the idea that individual interests are best served in the interests of the whole network (Kanter, 1972). The advantage that a network has over controlled collaborations is its

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<sup>7</sup> A system of separate vertical structures that inhibit knowledge-sharing and collaboration

flexibility and the reliance on information that the other parties bring into the network.

In uncertain situations, the network can quickly absorb a lot of information as the different organizations have their main interests and knowledge in different areas. As such, trust and cooperation becomes central in these networks. As trust have several sources, it can be reached through several means. For instance, familiarity that is reached through repeated interaction, calculative trust that builds on creating benefits for the own organization by exposing vulnerability, and finally confidence and trustworthy behavior credibility that arise from shared values and norms. While trust is a complex and multifaceted phenomenon, the complementarities between the components enable trust to function as a highly effective coordinating mechanism. Groups whose cohesion is based primarily on mutual trust are capable of extraordinary features.

It has been argued that reforms separating PA, NPM, and post-NPM are over-simplifications (Olsen, 2009; Christensen & Lægveid, 2011; Christensen, 2012) and that elements of each reform seems to coexist with each other or overlap. This means that the same service exchange can be influenced by all three reforms to greater or lesser extents (Adler, 2001).

### **2.3 Coordination mechanisms**

Narrowing the discussion of coordination from paradigmatic inherence down to intra- and interorganizational interactions, coordination mechanisms are viewed as both formal and emergent tools, technologies, or interactions that bring elements together (Okhuysen & Bechky, 2009). I rely on Srikanth and Puranam's (2014) typology for analyzing coordination efforts within regional public organizations. Srikanth and Puranam (2014) summarized the coordination mechanisms identified within the field of intra- and interorganizational coordination into three generic mechanisms: *modularity*, *ongoing communication*, and *tacit* coordinating mechanisms. These three generic mechanisms are aligned with my

notion of the core problem of vertical coordination. That is, the interaction or absence of interaction (Bouckaert et al., 2010) between individuals.

*Modularity* involves designing the organization into different units of task and responsibilities, as well as creating interfaces between these units (Srikanth & Puranam, 2014). A reason for coordination problems in public organizations is vertical specialization, where tasks, authority and responsibility are divided in hierarchical units (Lægneid et al., 2003). This results in autonomous organizations with narrow fields of competencies; namely, single-purpose agencies (Bouckaert et al., 2010). If these organizations and units are well-designed, the knowledge in the interface (plans, rules, and schedules specifying task and responsibilities) is sufficient (March & Simon, 1958; Scott & Davis, 2007; Galbraith, 1977; Tushman & Nadler, 1978) to establish common ground and ultimately to coordinate the actions across subunits (Baldwin & Clark, 2000; Simon, 1962; Ulrich & Eppinger, 1999). As the focus on modularity and organizational design manages dependencies between units through the creation of interfaces, it often reduces the need for ongoing communication. Thus, whereas ongoing communication constantly updates common ground, modularity involves working with a minimal, constant level of common ground that is embedded in the interface.

*Ongoing communication* has been highlighted as an important mechanism for updating and maintaining the common ground (March & Simon, 1958; Thompson, 1967; Okhuysen & Bechky, 2009; Srikanth & Puranam, 2014). Ongoing communication includes the ordinary interactions between people working in interdependent units. It seems that that physical closeness and co-locations influence the amount of interaction and communication between people in organizations (Allen, 1977; Okhuysen & Bechky, 2009), while virtual communication technology replacing face-to-face interactions seems to remain limited in updating common ground.

Research shows that co-presence helps achieve coordination by creating visibility. The organization members can see what others working on the task are doing, which leads to updating the common

ground (Kraut et al., 2002; Olson & Olson, 2000). Despite its advantages, co-location is not always possible, but as visibility is considered as an important enabler for updating on task progress, people attempt to make the work visible by communicating the status of the work through other means (Okhuysen & Bechky, 2009) in cases where co-location is difficult or impossible. Further, ongoing communication and social proximity can help create awareness between different units that ultimately helps coordinate through the impact that awareness has on the development of trust among individuals.

The *tacit* coordination mechanism, not to be confused with tacit knowledge,<sup>8</sup> leverages tacit and explicitly shared knowledge and includes coordination without the need for ongoing communication (Srikanth & Puranam, 2011; Srikanth & Puranam, 2014). Tacit coordination is not necessary for ongoing communication. Rather, this mechanism works in two ways. The first is coordination by using preexisting common ground that may not be specific to the task at hand; for instance, by job rotation (Ghoshal et al., 1994; Nohria & Ghoshal, 1997). The second is building common ground by observing each other when working side by side (Clark, 1996; Cramton, 2001; Gutwin et al., 2004).

Coordinating by using preexisting common ground leverages long-term ongoing personal communication and common ground as it creates awareness between the members (Kraut et al., 2002). Awareness develops a transactive memory system, where individuals learn from others and can use the group as an information hub (Hollingshead, 1998) that reduces the need for ongoing communication. Awareness is coordinated through the impact it has on the development of trust among individuals. Trust develops the confidence that others will possess expertise attributed to them (Liang et al., 1995). This makes individuals expect that others have the required expertise and can perform the tasks they are responsible for. It ensures that activities proceed effectively without the need for ongoing communication (McAllister, 1995). Further, proximity improves

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<sup>8</sup> Personal knowledge that is difficult to transfer to others (Polanyi 1958).

coordination by enhancing common ground through shared social context and the use of shared artifacts (Kraut et al., 2002; Olson & Olson, 2000; Olson et al., 2002).

Having discussed what coordination is and how we can use different coordination mechanisms to achieve coordination, the next section will elaborate why organizations differ so much in their ability to coordinate.

## **2.4 Coordination preconditions**

As a step towards understanding regional public organizations' coordination challenges, it is relevant to explore the preconditions of coordination to understand what drives coordination. Previous research on this area distinguishes three preconditions: (1) the organization, (2) coordination costs, and (3) interaction potential (Alexander, 1995).

*The organization* (or, more accurately, the members of organizations) have presumptions about policies, and these belief patterns shape the members approach to coordination (Chan & Clegg, 2002). Alexander (1995) argued that the structure of the organization and its characteristics influence the perception of coordination. For instance, the more centralized an organization is, the more likely it is to appreciate and engage in coordinated efforts. Similarly, other indicators that the organization will be open to coordination are informal contacts within the organization and across its subunits; trust, which can be a result of shared value; and a history of interaction or common background with free exchange of information and resources (Stephenson & Schnitzer, 2006; Whetten, 1981).

Further, organizations that acknowledge their role as a part in society, often distinguish between the presence of boundary spanning roles and interorganizational interactions (Whetten, 1981). They are also more likely to be willing to undertake coordinated efforts with other organizations. Organizations with narrow local concerns regarding only their own organization's mission are more likely to limit

coordination. Such a high degree of specialization, with a narrow local focus, makes coordination more difficult (Alter & Hage, 1993) and brings about new coordination requirements (Bouckaert et al., 2010). Therefore, it is plausible to argue that in the regional public sector, where the vertical specialization is high, coordination requirements are high and difficult.

*Coordination costs* and the benefits that can come from coordination are important drivers of accepting coordination. It can be a question of monetary cost and benefits (Whetten & Leung, 1979; Alexander, 1995). An example is changed overhead costs based on changed modularity or communication paths, compared to the benefits that comes out of the use of such changes in the modularity. However, coordination costs can also relate to self-interest, such as the perception of threats toward personal intentions (Whetten, 1981). For example, officials in public organizations may pursue specific policy and political goals that benefit their personal interests, and may not want to cooperate for fear of reducing their chances of reaching those goals (Bouckaert et al., 2010). Likewise, administrative routines, coordination efforts and even legal mandates for implementation may be sabotaged and undermined by middle-level officials, managers, or administrators who consider such organizational developments to be a threat to their control of valuable information (Alexander, 1995) or in the attempts to achieve greater coherence in governing.

Finally, an important precondition of coordination includes the various attitudes and relations between different organizations or divisions (Thomas et al., 2007; Alexander, 1995). *Interaction potentials* are influenced by attitudes and relations that are based on previous experience, real or perceived task interdependency, resource dependency (Whetten, 1981; Alexander, 1995), and previous experiences of similar collaborations and relationships in similar contexts. If the organizations have positive experiences, the prospects for coordination are good.

Although the presence of task interdependence is necessary to accomplish the task, the perceived interdependence can vary. For instance, there is high vertical interdependence between politicians,

administrative units and autonomous organizations in order to create user-oriented policies as well as formulate and implement them in the day-to-day work (Lægreid et al., 2014; Whetten, 1981). Despite such interdependence, organizations may focus simply on their own mission and perceive independence (Alexander, 1995). For instance, managers of public policies formulate and create policies, but the implementation is not of prime relevance. Rather, each level is responsible for only a specific part of the problem solving and linkages are mainly based on resource requirements (Skelcher et al., 1983; Mulford, 1984; Van de Ven & Walker, 1984), which weakens the dependency between the various levels. In such cases, when organizations perceive weak or no dependency, the forecasts of coordination is low. Aiming to integrate efforts within regional public organizations, such illusional independence within the various levels must be managed; this is accomplished through providing the necessary information. Therefore, information processing will be primarily necessary in order to reach integration between levels (Puranam et al., 2012, Gulati et al., 2012; Lawrence & Lorsch, 1967).

## **2.5 Information processing requirements**

Organizations process information to reduce uncertainty and equivocality (e.g., Argote, 1982; Galbraith, 1973; Daft & Lengel, 1986; Larsson & Bowen, 1989). Daft and Lengel (1986) proposed that uncertainty and equivocality are complementary forces that impact information processing. Uncertainty<sup>9</sup> portends the absence of information and answers (Downey & Slocum, 1975; Galbraith, 1977; Tushman & Nadler, 1978). Equivocality relates to the appearance of contradictory interpretations of the organization's situation (Weick, 1979). Daft and Lengel (1986) noted that equivocality originates from ambiguity and confusion, as often seen in the messy, paradoxical world of organizational decision making. High equivocality means confusion and a lack of understanding. Participants are not certain about what questions to ask, and it is not possible to give clear answers to the questions that are asked (March & Olson, 1976). Interdepartmental

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<sup>9</sup> The difference between the amount of information required to perform the task and the amount of information already possessed by the organization.

differentiation influences equivocality (Daft & Lengel, 1986) because high differentiation causes organizational departments to approach problems with different pre-understandings, goals, values, and priorities (Lawrence & Lorsch, 1967; Shrivastava & Mitroff, 1984). Even if the information processing is working properly throughout the organization, the departments will reach different interpretations of the information (Huber, 1991).

With high equivocality, new data may not resolve anything, and may instead increase confusion and uncertainty. While uncertainty can be reduced using impersonal, formal information systems that rapidly provide the system with a large amount of objective data (Daft & Lengel, 1986), equivocality can be reduced through personal (interactive) media, with participants talking things over and ultimately reaching a solution (Daft & Lengel, 1986; Gittel, 2002).

Finally, previous research has treated the structure of organizations as a means of meeting information processing requirements (Galbraith, 1973; Tushman & Nadler, 1978; Burns & Stalker, 1961; Skaggs & Galli-Debicella, 2012). Organizational structure affects both the volume and richness of the information that flows through the organization. From an information processing perspective, the chosen organizational structure reflects the architectural knowledge of an organization's designer. In cases when the organizational structure reflects poor architectural knowledge, information processing mechanisms can be used to compensate for any structural shortcomings, while maintaining departmental integration.

## **2.6 Organizational structure**

Organizational structure refers to the type of framework a company uses to distinguish roles and responsibilities, power, and authority, and the ways in which information flows through the organization (James & Jones, 1976). Research shows that organizational structure is not an independent concept, but is shaped and formed to correspond to the organization's internal and external needs (Burns & Stalker, 1961;

Macintosh, 1994; Skaggs & Galli-Debicella, 2012; Tushman & Nadler, 1978).

An organization chooses a structure that fits its purpose and can respond to internal and external changes and uncertainties (Burns & Stalker, 1961; Thompson, 1967). It has been argued that, when choosing structure, it is important to understand how the components of a system relate to each other (architectural knowledge) and how efforts can be coordinated to match the organizational structure with its environment (Puranam et al., 2012). The fit between organizational structure and the environment enables an organization to implement procedures and decision-making processes that integrate departments and help the organization reach its goals (Lawrence & Lorsch, 1967; Skaggs & Galli-Debicella, 2012).

Scholars have conceptualized two broad forms of organizational structure: mechanistic and organic (e.g., Burns & Stalker, 1961; Child & McGrath, 2001). These two forms polarize (Burns & Stalker, 1961) organizational structures and its degree of flexibility, ranging from completely mechanistic to completely organic (Skaggs & Galli-Debicella, 2012). A mechanistic or bureaucratic structure has two fundamental characteristics (Burns & Stalker, 1961; Macintosh, 1994; Tushman & Nadler, 1978). First, the structure is divided into clear, systematic, and hierarchical management levels. This hierarchy reflects a well-defined allocation of formal authority (Aghion & Tirole, 1997), in which top-level managers make the majority of decisions. The mechanistic organization structure is highly differentiated, with departments and functions intended to control costs and production. Integration between the departments tends to be low. The quality of collaboration among functional areas or departments is poor (Lawrence & Lorsch, 1967). Decision-making tends to be a bottleneck since few managers understand all functions (Skaggs & Galli-Debicella, 2012). Similar to decision-making, communication flows through hierarchical routes, and the interaction is vertical. With this structure, divisions are not dependent on each other, but instead carry out their own specific responsibilities. Second, a mechanistic organization stresses formalization, rules, and procedures that form the basis of authority and direction. Such an organization can achieve great

efficiencies, is easy to maintain, and rarely requires change. This structure is appropriate for stable conditions since the ability to react and adapt quickly in changing environments is limited (Burns & Stalker, 1961; Head, 2005).

In an organic or relational structure (Burns & Stalker, 1961; Macintosh, 1994; Tushman & Nadler, 1978), by contrast, information flows laterally and resource allocation are flexible (Head, 2005). The organic organization is well equipped to deal with uncertainty (cf. Burns & Stalker, 1961; Child & McGrath, 2001) and the rapid distribution of knowledge results in an increased ability to respond to changes in internal and external environments. When the environment changes, the organic organization is able to quickly gather, process, and communicate information. Fast and lateral communication is crucial for maintaining a competitive advantage and protecting effectiveness (Head, 2005). Organic organizations often form teams to coordinate tasks. When faced with uncertainty, organic organizations can take actions across departmental boundaries without being confined by strict hierarchical structures and rules. Their decision-making processes are decentralized and vision-driven.

## **2.7 Organizational learning**

Conceptualizations of organizational learning focus on how information processing changes the repertoire of organizational behaviors. Resting on Huber's (1991) argumentation that an organizational entity learns when processing information – either intentionally or unintentionally changing the entity's range of potential behaviors – the concept of organizational structure, preconditions and information processing, becomes vital for understanding organizational learning. Accordingly, organizational learning may occur even though information processing does not contribute to formal organizational goals or improved organizational know-how and effectiveness. Instead, an organization is assumed to have learned when any of its entities acquire information that its constituent agents recognize as potentially useful. The level of organizational learning increases when the number of organizational units that obtain

information, and recognize and distribute it, increases. The learning is further increased when the units develop various interpretations of the information (Huber, 1991). During this process, member agents develop a coherent understanding based on the units of different interpretations (Huber, 1991). This is highly beneficial and desirable for the organization. Accordingly, a high level of learning can be reached if the organization allows for equivocality and tries to create uniform understanding through personal interaction (cf. Weick, 1979).

### **2.7.1 Forms of organizational Learning**

Exploitation and exploration can be used to distinguish two forms of learning (March, 1991; Kang et al., 2007). Exploitative learning involves deepening and refining existing knowledge, while exploratory learning involves the search for knowledge that does not exist within the organization.

Exploitative learning organizations increase their knowledge base, and learn by refining (Kang et al., 2007) existing knowledge and improving its use. The learning arises as the organization seeks to find well-defined solutions to well-defined questions within the organization's existing knowledge base. Dewar and Dutton (1986) argued that exploitative learning is more incremental, focused on solving routine issues related to the organization's current operations. It also stabilizes routine processes and outcomes. The outcomes are foreseeable and less diverse than is the case with exploratory learning (Schulz, 2001). The benefits of exploitative organizational learning include predictable costs, contributions to incremental innovations, and improvements to productivity and efficiency (Argyris & Schön, 1978; Benner & Tushman, 2003; Danneels, 2002; Eisenhardt & Martin, 2000; Katila & Ahuja, 2002; March, 1991; McGrath, 2001; Starbuck, 1992). According to Coleman (1988) and Baker and Obstfeld (1999), close social connections and low differentiation among departments make exploitative learning more efficient and create an understanding of the other parties' idiosyncratic knowledge. However, Gargiulo and Benassi (2000) argued that close social connections could also lock employees into small social circles and limit their opportunities to explore other

knowledge domains. This may restrict the organization's ability to learn and ultimately to survive as the problem solutions deteriorate and eventually become obsolete (Levinthal & March, 1993). Constant exploitative learning may lead to contributions to incremental organizational change, and improvements to productivity and efficiency, albeit at the expense of effectiveness (Argyris & Schön, 1978; Benner & Tushman, 2003; Danneels, 2002; Eisenhardt & Martin, 2000; Katila & Ahuja, 2002; March, 1991; McGrath, 2001; Starbuck, 1992).

In contrast, exploratory learning is based on the search for generalizable information and opens up the possibility for radically new ideas and innovations that may dramatically improve the organization's performance. Exploratory learning also facilitates the ability to adapt to dynamic and unpredictable, complex, ever-changing environments (Danneels, 2002; Eisenhardt & Martin, 2000; McGrath, 2001; Teece et al., 1997). Granovetter (1973) and Burt (1992) suggested that less rigid social relations and high differentiation (Daft & Lengel, 1986) among departments enable employees to reach new and diverse knowledge through connections across the usual boundaries. This also tends to create opportunities to identify and use new knowledge from a variety of sources that differ from their own, encouraging exploratory learning. Despite the innovative potential of exploratory learning, Levinthal and March (1993) noted that focusing only on this approach could prevent an organization from gaining the full returns of its knowledge. Constant exploratory learning may lead to increased effectiveness while causing decreased efficiency; that is, if the organization continuously renews its knowledge, this can prevent the organization from gaining the full returns of its knowledge (Levinthal & March, 1993).

The notion of balance between exploitation and exploration, or between incremental and radical organizational change, has been a consistent theme across several approaches to research in organizational adaptation (e.g. Brown & Eisenhardt, 1998; Burgelman, 1994; March, 1991; Levinthal & March, 1993; Gavetti & Levinthal, 2000; Tushman & Romanelli, 1985). Researchers have observed that an organization's ability to compete over time may lie in its ability to

both integrate and build upon its current competencies, while simultaneously developing fundamentally new capabilities (Teece et al., 1997). As such, the ability to both exploit and explore (Ghemawat & Costa, 1993; March, 1991; Weick, 1979) is important for ensuring current and future viability (Bierly & Chakrabarti, 1996; Katila & Ahuja, 2002; Tushman & O'Reilly, 1996).

However, these approaches are contradictory organizational processes (March, 1991; Benner & Tushman, 2003), which makes their coexistence challenging. While organizational literature has stressed the importance of a balance between efficiency and effectiveness as well as exploitation and exploration, there are multiple points of view on how organizations actually strike this balance. Two major modes are structural and sequential ambidexterity. Structural ambidexterity includes organizations that build in both tight and loose coupling simultaneously. These organizations are composed of multiple tightly coupled subunits that are themselves loosely coupled from each other (Benner & Tushman, 1991), which results in highly differentiated, but weakly integrated subunits. These contrasting units should be physically and culturally separated from each other (Tushman & O'Reilly, 1996), but must be strategically integrated (Benner & Tushman, 1991).

The opponents of structural ambidexterity argue that the coexistence of two modes of mutually exclusive learning is not plausible and that it would create too much tension within the organization. Instead, they suggest that organizations should be sequentially engaged in exploitative and exploratory learning (Levinthal & March, 1993; Choi & Chandler, 2015). Such argumentation implies that exploitation and exploration are not equally distributed across time. Proponents of sequential ambidexterity argue that organizations are engaged in long periods of exploitative activities and short periods of exploration. The need for exploration emerges due to long-term organizational stress caused by such factors as low performance or political or organizational conflicts (Tushman & Romanelli, 1985). In public organizations, such exploration or reorientation periods comes more or less naturally due to the changing political periods (Choi & Chandler, 2015). A major challenge with sequential ambidexterity in public sector is the risk of

bias toward exploration, with too much enthusiasm for radical organizational change during the current political term (Holmes, 2005) resulting in appropriate exploitation being neglected. While such enthusiasm does not always lead to realization of the exploration, it does lead to resources being allocated toward exploration units at the expense of other units focusing on exploitation and efficiency.

Another factor that differs from the private sector and affects public sector exploration is that organizational change in the public sector is exposed to higher levels of public scrutiny, and often earlier — before they have had a chance to be fully developed — than is the case for the private or voluntary sectors (Albury, 2005). Such awareness of public scrutiny can both foster and hamper explorative activities. In the case of the latter, as exploration is about search — which leads to failure, which leads to more search (Levinthal & March, 1993) — the risks of exploration are exacerbated compared to exploitation in public sector, fostering exploitation at the expense of exploration. The former occurs when public organizations perceive that their innovation effort have failed and try another path prematurely (Levinthal & March, 1993) in order to reach positive outcome during the political term. Such constant exploration often leads to high exploration costs. However, due to the very low probability of disbanding due to high innovation costs, politicians and public managers may undervalue and underfund the costs of the exploration (Choi & Chandler, 2015). Further, as the benefits of exploration take time to realize, the focus on public sector development may create pressure to explore just in order to publicly present that a certain amount of innovation activity is taking place (Askim et al., 2010).

This thesis considers exploitation to be refinement activities at a service delivery level that imply learning that enhances the usability of the service and exploration activities as innovation in core service and management structures coming from political pressure. Within public organizations, the dilemma of exploitation and exploration is not just due to their organizational contradiction and nature, but also due to the variation among politicians, public administrators and quasi-autonomous implementers, which often results in incongruity within the attempts to adopt and implement an organizational change (Gains

& John, 2010). Political pressure from a legislature can be so multifaceted and nuanced so that regional and local political bodies can adapt the organizational change to their own perceptions. Furthermore, even though public administrative organizations are responsive to political pressure, public managers can, due to a lack of motivation to learn or innovate (March, 1991), ignore the pressure according to their own motivation and biases (Moynihan & Levartu, 2012). This is due to the public organization's structure that, despite effectiveness and efficiency pressure, lacks the bottom line required for public service survival (Choi & Chandler, 2015). Furthermore, due to the structure of contemporary public organizations, an additional level of incongruity might be added as the quasi-autonomous agencies delivering the public service can – similar to public managers lacking motivation or incentives to some degree, based on the procurement or assignment specification – ignore the pressure according to their own motivation and biases.

Consequently, exploitative and exploratory learning is necessary to improve organizational capability,<sup>10</sup> as is matching services to user needs. Accordingly, as user needs are likely to change over time (Högström et al., 2010; Löfgren et al., 2011), organizational learning is necessary if public organizations are to be capable of adapting their programs to change, make acceptable decisions, and achieve current and future objectives (Galbraith, 1973).

In exploring users' changing needs, this thesis has used the theory of attractive quality. Developed by Kano and his coworkers, the theory of attractive quality offers a useful theory to better understand different aspects of how users evaluate services (Kano et al., 1984; Matzler et al., 1996, Löfgren & Witell, 2005). Kano et al. (1984) also presented a model that evaluates patterns of quality, based on the relationship between service requirements and users' evaluation of their experience (Löfgren & Witell, 2005). As such, the theory of attractive quality acts both as a theory and a method. The theory of attractive quality is presented in section 3.3.1.

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<sup>10</sup> Coordinating internal structures and information processing at the same time as increasing and including information about users' changing needs.

## **2.8 Final comments on the theoretical framework**

The present theoretical framework is an attempt to provide a basis that applies both to public management theories as well as organizational theories. The composition of this chapter is based on the notion that public organizations are complex and therefore need a baseline that describes their reform history. However, due to the vertical fragmentation and specializations of organizations acting on territorial levels, their ability to perform public service that adds to public value can be understood based on inter- and intra-organizational theories.

More specifically, the coordination activities are discussed in this thesis within the framework of information processing and organizational structures. However, this requires a basic understanding of coordination as concept as well as coordination mechanisms. By viewing organizations as systems of coordinated action among individuals and groups (March and Simon, 1958), public organizations' coordination challenges are further explored through the lens of coordination preconditions rather than being based solely on structures and functions. Finally, with public value being defined as the ability to reach changing (Fernandes & Pacheco, 2007; Hartley, 2010; Albury, 2005; Talbot 2005) citizen needs (Moore, 1995; Moore, 2000; Spano, 2009), the ability of organizations to change the range of their behavior – that is, organizational learning – becomes central to the discussion.

### 3 Research methodology and design

In this thesis, both qualitative (Papers II and IV) and quantitative (Papers I and III) studies have been used. The methodological research design for each paper will be described in detail later in this chapter. The chapter ends by reflecting on the research process. First, however, I will discuss the methodological points of departure for this thesis, including a short discussion of qualitative and quantitative methods and the combination of such, followed by my choice of research method. This is due to the fact that the present thesis builds on the idea that social research can find many positive features in more than just one paradigm and that such intellectual tension can serve us well while facing research problems (Johnson, 2017). Similar to Johnson and Onwuegbuzie (2004), I believe that both quantitative and qualitative research is important and useful, with its own strengths and weaknesses. This view will be further discussed in the next section.

#### 3.1 Methodological point of departure

On a continuum with the ideal paradigm for social research on each end (Figure 2), the dispute between quantitative and qualitative purists has lasted for more than a century (Johnson & Onwuegbuzie, 2004). The researchers involved in the dispute argue that these paradigms are incompatible and combining them is impossible (Hammersley, 1992; Howe, 1988; Guba, 1990).

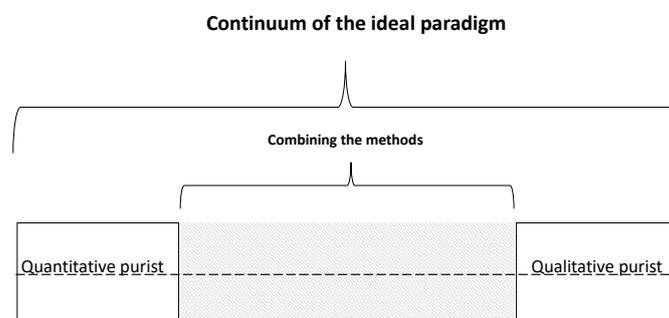


Figure 2. Continuum of the ideal paradigm for social research (inspired by Johnson et al., 2007).

Nevertheless, a stream of social research has argued for the importance and usefulness of both quantitative and qualitative methods moving beyond the discussion on pledging alliances to either positivism or interpretivism (Morgan & Smircich, 1980; Johnson, 2017). Instead, the focus has become the matter of choosing the method appropriate for the research. Although both quantitative and qualitative research aims to transfer knowledge gained from data collected during fieldwork to modify or create theory, the means of doing this are different (Morse, 1999). Some researchers have argued that the differences are so fundamental that they cannot and should not be combined (Howe, 1988; Guba, 1990). Others have stated that the choice of method should not be affected by methodological or philosophical commitment, but instead by the purposes and circumstances of the study (Hammersley, 1992). The present thesis uses both quantitative and qualitative research approaches and finally combines the two in a pluralistic way to reach the overall aim of the thesis.

The quantitative approach operates under the assumption of objectivity, where researchers assume there is one truth or reality to be observed. Following this approach, the comparability of the sample and the study population is highly important because the sample is assumed to represent the population (Morse, 1999). In quantitative research, human thoughts and behavior are assumed to be highly regular and predictable. Qualitative approaches, on the other hand, operate under the assumption that the researcher can, by getting closer to the subject, understand how multiple dimensions and layers of reality interact and see reality from the perspective of the actors being studied. Human thoughts and behavior are viewed as personal and unpredictable, changing from time to time. Following this approach, reality and truth are subjective, personal, and constructed within different groups because “right or wrong” are defined within these social constructions (Johnson & Christensen, 2010). Some of the characteristics of quantitative, qualitative and combined research are presented in Table 3.

*Table 3. Comparison of the methodological approaches (based on Johnson & Christensen, 2010)*

	<b>Quantitative Research</b>	<b>Combined Research</b>	<b>Qualitative Research</b>
<b>Scientific method</b>	Confirmatory	Confirmatory and exploratory	Exploratory
<b>Connection of theory and data</b>	Deduction	Abduction	Induction
<b>Ontology</b>	Objective	Pluralism; appreciation of objective and subjective	Subjective
<b>Epistemology</b>	Scientific realism; search for truth	Dialectical pragmatism	Individual and group justification; varying standards
<b>View of human behavior</b>	Regular and predictable	Dynamic, complex, and partially predictable	Situational and unpredictable

The limitation of using only one method has led to a greater interest in and acceptance of the combination of methods to understand difficult research questions; the use of only one approach is even considered to be incomplete in some aspects (Johnson & Christensen, 2010). Tashakkori and Teddlie (1998) argued that there are different scenarios for combining qualitative and quantitative methods. For example, the qualitative method could be used to develop and explain quantitative measures. Depending on the stage of the study, another approach could be to use the two methods in parallel, to better understand the subject (Tashakkori & Teddlie, 1998). Researchers who use both methods argue that it is important to include both confirmatory and exploratory methods in their studies (Johnson & Onwuegbuzie, 2004) and to adapt their methods to particular subjects and situations. They iterate between a confirmatory perspective and deep examination of phenomena (Bryman, 1997).

### 3.2 My choice of research method

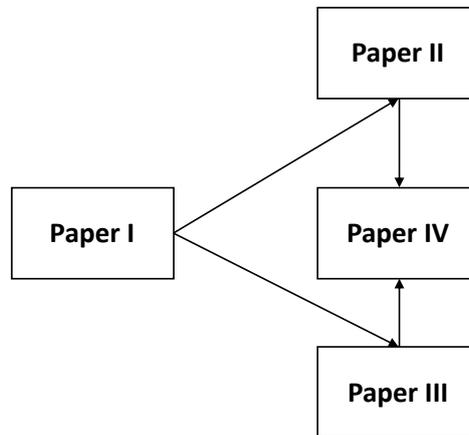
In order to describe and explain public organizations' coordination challenges and elaborate on how these challenges affect public organizations' ability to perform public service that adds to public value, a combination of qualitative and quantitative methods was used. This design considered the research as a whole, but also the different parts and levels that needed to be done in order to reach a deeper understanding. As such, the research questions have been put in the spotlight and I have stepped away from paradigmatic commitments, appreciating both objectivity and subjectivity. This has not been done in an anarchistic way, but rather with awareness and knowledge of the strengths and weaknesses of the different paradigms.



*Figure 3. DNA-String illustrating the dialectical relationship of explanation and understanding. Illustration by Sebastian Wiman.*

Moving between explanation and understanding has driven the interpretation of this thesis. Describing the relationship between explanation and understanding as corresponding between subjectivity and objectivity would miss a vital dimension; namely, the dialectic relationship and the tension between them. Metaphorically, I see the development of this thesis as a dyadic spiral, like a DNA string (Figure 3), held in place by the ongoing dialectical relationship between explanation and understanding (Alvesson & Sköldbberg, 2009). I see this as the dialectical spiral of interpretation (Kristensson Ugglå, 2010) that sets the DNA – the identity of this thesis – where explanation and understanding are evolving together. It is in such process that the details I gathered as an insider found their place and fueled the discussion, allowing an analysis at a higher degree of abstraction.

Figure 4 illustrates how explanation and understanding evolve together by explaining how they triggered each other (Alvesson & Sköldbberg, 2009) throughout the whole process, resulting in the four appended papers.



*Figure 4. An overview of links between the appended papers.*

The survey used in Paper I produced a large data set that provides broad insights into the requirements of public service users and the possibility of connecting these requirements to public policy. The quantitative survey created a first level of understanding and triggered the interpretation spiral to “spin,” as I sought explanations and more detailed information. This process triggered Paper II with the need for deeper understanding of regional public organizations and what affects their ability to adapt to such user requirements. At the same time, Paper I indicated possible life cycle changes in the user requirements, which laid the groundwork for Paper III.

Papers II and III both triggered Paper IV. Paper III identified the magnitude of user preferences and life cycle changes, emphasizing the need for public organizations to change in order to meet changing requirements. Paper II pushed for a deeper understanding of what it is that decides how regional public organizations are organized and whether regional public organizations have the possibility and intention to change according to user requirements. I regard the methods used in this thesis as equally necessary and parallel in order to produce these results. Table 4 provides an overview of the research

issue and data gathering in the four appended papers. The following sections describe the research procedures in greater detail.

*Table 4. An overview of the research issue and data gathering in the appended papers*

<b>Research issues</b>	<b>Paper I</b>	<b>Paper II</b>	<b>Paper III</b>	<b>Paper IV</b>
<b>Aim</b>	Understanding how achievement of service requirements affects organizations' relevance and preference among users	Exploring how organizational structure and information processes frame organizations' abilities to reach their objectives	Shed light on clock speed-mismatch between the supply- and demand side of public transport and how such mismatch impacts the attractiveness of public transport	Explore the link between pre-conditions of coordination and the coordination mechanisms in regional public organizations
<b>Research approach</b>	Quantitative	Qualitative	Quantitative	Qualitative
<b>Data Collection</b>	Questionnaires	Semi-structured interviews, policy documents	Questionnaires	Semi-structured interviews, policy documents
<b>Empirical basis</b>	930 Swedish public transport users	11 transcribed interviews (in total approx. 550 pages) 11 policy documents (in total approx., 600 pages)	921 Swedish public transport users	10 transcribed interviews (in total approx. 500 pages) 10 policy documents (in total approx., 550 pages)

### **3.3 The questionnaire studies: Paper I and Paper III**

Papers I and III share the same method, as they adopt the theory of attractive quality using the Kano method (Kano et al., 1984). This method is used to evaluate and divide specific quality attributes in relation to the attribute satisfaction of users. In the next two sections, I will elaborate on the theory of attractive quality, followed by a detailed description of Papers I and III from a methodological perspective.

### **3.3.1 Theory of attractive quality**

The theory of attractive quality posits that quality is asymmetrical. It evaluates and divides specific quality attributes in relation to users' subjective attribute satisfaction. According to this theory, the type of requirement defines perceived product quality and, thus, user satisfaction (Sauerwein et al., 1996). As such, the theory of attractive quality can illuminate various aspects of user evaluations of a product or offer (Löfgren & Witell, 2005) and propose five quality categories based on the relation between an attribute's impact on user and the degree of attribute achievement (Kano et al., 1984; Löfgren & Witell, 2005).

These five quality categories are as follows. First, the must-be attributes (M) are the basic criteria of a product. The user considers these attributes to be basic aspects of service that they take for granted and may not clearly demand. Consequently, fulfilling must-be attributes will only lead to a state of "not dissatisfied" and cannot increase user satisfaction (Kano et al., 1984). Second, one-dimensional quality attributes (O) are linear, symmetrical, and proportional to the degree of achievement. The higher the degree of achievement, the greater the user's satisfaction, and vice versa (Sauerwein et al., 1996). Third, attractive quality (A) attributes are normally not expected by the customer and can be described as surprise and delight attributes. They provide satisfaction when they are achieved, but do not cause dissatisfaction when they are not fulfilled (Kano et al., 1984). Users are usually unable to specify the need for attractive attributes because they are often unaware of such a need. Identification of these needs can lead to competitive advantages, which can create loyalty among users (Bergman & Klefsjö 2007). Fourth, indifferent quality (I) requirements refer to aspects of an offering that may be needed to facilitate value creation, but that users do not care about, resulting in neither satisfaction nor dissatisfaction (Högström, 2011). However, these attributes may be important to other stakeholders or represent a new attribute that consumers simply are not aware of, and therefore have difficulty evaluating. As such, indifferent attributes may become important factors in differentiating consumer experiences once consumers actually experience them (cf. Löfgren et al., 2011). Another

explanation may be that the attribute has become outdated and is no longer requested.

Reverse quality (R) refers to those attributes for which a high degree of achievement results in dissatisfaction, while a low degree of achievement results in satisfaction (Löfgren & Witell, 2005). Lately, the understanding of reverse quality attributes acting solely as one-dimensional have been questioned and reverse attribute have suggested to affect dissatisfaction in different ways. Three sub-categories have been suggested (Högström, 2011); namely, *reverse attractive* (Ra) *reverse one-dimensional* (Ro) and *reverse must-be* (Rm). Ra is considered as acceptable but unattractive aspects of the service. As users expect these aspects to be performed, these attributes have the ability to satisfy and delight users if not present. Ro have a ‘the less – the better’ relationship to user experience, as such these attributes, when not fully performed, can satisfy the users and make them prefer the service. However, if these aspects are fully performed, the users will be dissatisfied and perceive the offering as irrelevant. Finally, the fulfillment of Rm attributes is perceived as increasingly dissatisfying and the present of such attributes might result in the user perceiving the offering as irrelevant (Högström, 2011)

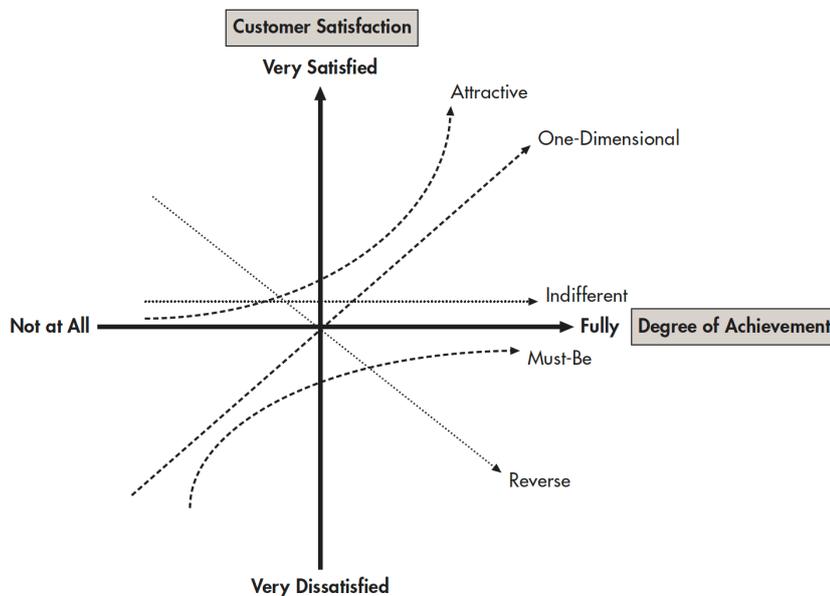


Figure 5. The theory of attractive quality (adopted from Löfgren & Witell, 2005).

In Figure 5, the horizontal axis represents the degree to which a certain requirement is achieved, and the vertical axis corresponds to the user's experience evaluation. The graphs illustrate the nature of the theory's quality categories and, thus, how requirement achievements can have an asymmetrical or symmetrical relationship with users' experience evaluations.

The importance hierarchy of the categories can be understood based on Matzler et al.'s (1996) evaluation rule "M > O > A > I", where must-be attributes have the top priority and indifferent attributes have the lowest importance. Following the same path as the evaluation rule, Kano et al. (2001) argued that the quality attributes are dynamic and can change over time, from indifferent to attractive, to one-dimensional, to must-be (Kano et al., 2001; Löfgren et al., 2011). These life cycle changes are the most common explanations of why some attributes cannot be fully assigned to a certain category (Berger et al., 1993; Högström et al., 2010; Löfgren et al., 2011).

### ***3.3.2 Kano method used in Paper I and Paper III***

The data used in Paper I, and also to some extent the idea, stem from my master's thesis, which was written a few years earlier. The final idea emerged as Dr. Högström, Dr. Löfgren, Dr. Johnson, and I discussed service user requirements based on the collected data. After completing the study conducted for Paper I, we developed an interest in life cycle studies. Högström, Johnson, Löfgren, and I were all interested in conducting a follow-up study and, among other things, looking for life cycle changes. Six years later we were finally given this opportunity and we decided to make an update study that was of a similar vein and size as the study for Paper I. As such, the pre-study, the sample size and type, as well as the reward for answering the questionnaire were all made in the same way. Since the studies were conducted in exactly the same way, we consider the processes as identical.

To create a relevant questionnaire and follow the approach of previous Kano studies (e.g., Högström et al., 2010; Matzler et al., 1996), a preliminary study was conducted to identify specific user requirements

in public transport. A total of 30 interviews were conducted, resulting in 25 service requirements in the study for paper I. Six years later, another preliminary study including 30 interviews was conducted, resulting in 29 service requirements in the study for Paper III.

The Kano questionnaire contains paired questions based on each of the service requirements that emerged from the preliminary studies. Each question has two parts (see Table 5). The first part (A) relates to the user’s reaction if the product fulfills a specific requirement (the functional part of the question). The second part (B) relates to user’s reaction if the service does not fulfill the requirement (the dysfunctional part). The respondent can answer each part of the question by choosing from among five alternatives. At the end of the questionnaire for Paper I, and at the end on each question for the questionnaire for Paper III, the respondents were also asked to rate the importance of the quality attributes on a scale of 1–10. The result of this final section was used to divide the survey’s attributes into context-specific public transport quality dimensions.

*Table 5. Example of Kano pair questions*

A) How do you feel if the service is environmentally friendly?	<ol style="list-style-type: none"> <li>1. I like it that way.</li> <li>2. It must be that way.</li> <li>3. I am neutral.</li> <li>4. I can live with it that way.</li> <li>5. I dislike it that way.</li> </ol>
B) How do you feel if the service is <b>NOT</b> environmentally friendly?	<ol style="list-style-type: none"> <li>1. I like it that way.</li> <li>2. It must be that way.</li> <li>3. I am neutral.</li> <li>4. I can live with it that way.</li> <li>5. I dislike it that way.</li> </ol>

To ensure a representative sample, for each study, the questionnaires was distributed by mail to a random sample of 2,500 public transport users located in the county of Värmland. The sample was drawn from a database of potential and existing local public transport users. A total of 930 complete responses were received in the study for Paper I and 921 were received in the study for Paper III; this represents a response rate of 37 percent for both studies.

Table 6. Classification table (based on Berger et al., 1993; Högström 2011; Högström et al., 2016)

Quality attribute □ □		Dysfunctional				
		1. like	2. must be	3. neutral	4. live with	5. dislike
Functional	1. like	Q	A	A	A	O
	2. must be	Ra	I	I	I	M
	3. neutral	Ra	I	I	I	M
	4. live with	Ra	I	I	I	M
	5. dislike	Ro	Rm	Rm	Rm	Q

**M** = must-be **O** = one-dimensional **A** = attractive **I** = indifferent **R** = reverse **Q** = questionable

Based on the respondents' answers to the paired question, the classification table (Table 6) was used to classify the answers into quality categories in the theory of attractive quality (Kano et al., 1984; Löfgren & Witell, 2005; Berger et al., 1993; Högström 2011; Högström et al., 2016). Non-significant attribute classifications were categorized as combinations. To ensure the reliability and validity of the results, an analysis was made that divided the sample into segments based on age, gender, and travel habits to identify potential biases. This analysis showed no significant differences in Kano categorizations between different segments in any of the studies.

### 3.4 The Interview Studies: Paper II and Paper IV

Papers II and IV share the empirical research. Starting my PhD studies as an industrial PhD student within the public transport authority in Värmland gave me a unique opportunity as I was an insider. Performing the interviews as an insider offered transparent interviews with rich content. I caught this opportunity and organized the open questions of the interviews in such a way that it offered the possibility to gather a large amount of data, which were used in Paper II and Paper IV. One case was removed during the coding process of Paper IV. Paper IV required data beyond objective descriptions of the organization and their structure. This requires insights of underlying factors that have affected the choice of structure and coordination instruments. The interviewee did not elaborate on these issues.

The idea of Paper II developed as Dr. Johnson and I discussed the different conditions of the Regional Public Transport Authorities (RPTAs) and what opportunities they have, due to their structures, to learn and change. The idea of Paper IV emerged as Dr. Johnson and I discussed what preconditions determine how regional public organizations are organized and what possibilities they have to change.

These two papers are based on semi-structured interviews and document studies. Among the 21 RPTAs in Sweden, the interview study included 11 respondents representing 11 different RPTAs. The criteria applied for participation were that the interviewees had been involved throughout the process with the creation of the RPTA and their strategic documents, as well as been active in the daily processes of the RPTA. The interviews were conducted by phone. Although the interviews were open and the aim was to have in-depth conversations, an interview guide was used to guide the way. The use of semi-structured interviews gave us the opportunity to be explorative and gave the interviewees the opportunity to speak freely and tell their story.

The empirical study began with a pre-study, including four semi-structured phone interviews to check the appropriateness of the research context and the informants. The pre-study showed that the type of organization varied among the regions, typically through the regional federation chosen for the placement of RPTA, financial management, and the form of the operational organization for public transport; that is, either through departments within the regional body or publicly owned companies. This information provided guidelines for selecting the main study's sample, and the additional seven cases were chosen to broadly represent the different types of RPTAs.

The case selection resulted in a total of 11 semi-structured, in-depth phone interviews with managers (or equivalents)<sup>11</sup> of the RPTAs. The interviews focused on the organizations' governance, policy

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<sup>11</sup> Due to the different constellations of the RPTAs, the interviews had different titles, such as head of public transport authority, transport director, strategist, and civil servant at the department of agency support.

documents, roles and responsibilities, and intra- and inter-organizational relationships. Each interview lasted two-and-a-half to three hours and was audio-recorded as well as transcribed verbatim. Narrative case descriptions were created for all cases. These case descriptions were sent to each respondent, all of whom agreed with the content. Next, all documents referenced by the respondents during the interviews were studied. These additional data sources provided an external check that assisted coding and interpretation during data analysis.

After finalizing the interviews, the coding processes of Papers II and IV were separated. With the aim of each paper in focus, we used memos to develop each studies' model and typology (Bryman & Bell, 2011; Miles & Huberman, 1994). The memos were continuously organized, matched, and compared as we crystallized various ideas and structured thoughts along categories and themes (Bryman & Bell, 2011). In Paper II, quotations from the interviews were used to illustration of the various organizational designs found in the cases.

The coding process of Paper IV was inspired by a more systematic approach (Gioia et al., 2013) and the memos and case descriptions resulted in a first-order coding. The first-order coding reflected the coordination activities of the cases in one dimension and the drivers of coordination activities in the other. This resulted in a second-order coding that identified eight coordination instruments in the dimension focusing on coordination activities and four prerequisites in the dimension focusing on the drivers of coordination activities. Furthermore, these codes were, on an aggregated level, explained by three coordination mechanisms as well as three pre-conditions of coordination.

### **3.5 A reflection on the research process**

Reflecting on the research process, I rely on Lincon and Guba's (1985) concept of trustworthiness and authenticity as an alternative to reliability and validity. Due to my insider role as well as the pluralistic

form of this thesis, I believe that trustworthiness and authenticity offer the best framework when reflecting on this process.

### **3.5.1 Trustworthiness**

Trustworthiness is best described by Lincon and Guba (1985), who argued that the concept concerns the matter of why the study's findings are "worth paying attention to" and "worth taking account of" (Lincon & Guba, 1985, p. 290).

Trustworthiness refers to the degree of confidence in data, interpretation, and methods used to ensure the quality of the research (Polit & Beck, 2004). The trustworthiness reflection of this thesis rests on four sub-categories: credibility, transferability, dependability, and confirmability (Lincon & Guba, 1985). Credibility is about creating reliability in the results by ensuring that the research is carried out in accordance with methodological rules and that the results have undergone member checks<sup>12</sup> (Lincon & Guba, 1985, Krefting, 1991). Transferability focuses on thick descriptive data with narratives about the context so that the reader can judge the fit or similarity to apply the findings elsewhere. Dependability raises the issue of auditing of the research process suggesting competent external auditors. Finally, confirmability is concerned with the objectivity of the results (Lincon & Guba, 1985).

In order to ensure the *credibility* of this thesis, all guidelines and methodological checkpoints for the quantitative studies were followed, and member checks were used on different occasions for the qualitative study. During the pre-study for the qualitative data used in Papers II and IV, interviewees had the opportunity to express their views on their parts of the narrative case descriptions. First, the narratives and case descriptions were sent out to the four cases in the pre-study. Later, an in-person meeting was organized where the result of the pre-study was

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<sup>12</sup> "Member checking is a technique that consists of continually testing with informants the researcher's data, analytic categories, interpretations, and conclusions (Lincoln & Guba, 1985)." (Krefting, 1991, p. 219)

presented and discussed; all participants agreed with the written document as well as the presentation. In addition, the findings of the qualitative study as a whole were presented at a workshop, where representatives of the 21 Swedish RPTAs (including the 11 cases studied) and other national actors within Swedish public transport were present. Informants agreed with the findings and the logic of the study and provided feedback that confirmed the analysis.

Assessing transferability, all papers offer thick descriptions of the context as well as the method used. The quantitative papers include context descriptions, and tables describing various statistical checkpoints and method used. The qualitative papers include context descriptions, abundant quotes, and coding schemas. Such transparency is offered in order to give the reader enough data, qualitative or quantitative, to judge the degree to which the results are *transferable* to another context.

Errors and biases were minimized as much as possible. I believe that the division of “outsider” and “insider” roles that my co-writers and I have had during the research process have contributed to such minimization and enhanced the *dependability* of this thesis. While I collected all the data used within this thesis, all the collected data were presented and explained in detail for my co-writers, almost acting as auditors. This process did not consist of pure presentations, but rather as deep discussions and struggles between myself and my co-writers, with the dependability of the research in focus. The bases for such discussions have included total transparency regarding raw data files, as well as formulas and calculations for the quantitative study and transcriptions, case descriptions, summaries, strategic documents, and all other managerial documents provided by the respondents for the qualitative study.

Assessing the confirmability of this thesis, my position as an insider when collecting the data (dividing my time equally between being a researcher and a public official in the public transport authority) has been important. As an insider, I was welcomed with great transparency during the qualitative data collection. The transparency that these people offered me gave me a much clearer understanding of the

problem than could have been possible during a more traditional researcher and respondent interaction through interviews. In the same vein as Alvesson and Sköldbberg (2009), I have an open attitude regarding the vital importance of interpretation and acknowledge that social, political, and ideological elements are woven together while constructing, interpreting, and writing empirical material. As such, I agree that all independent empirical material, whether interview statements, questionnaire questions, response alternative, or observations, is – to a certain extent – constructed by the researcher, and is therefore an interpretation. As such, I am aware that my interpretations have influenced all the steps of this research influencing the confirmability of this research: when I decided what was interesting to study, what aim would lead to interesting results, when choosing methods and informants, observing informants, and when interpreting the empirical material. However, I embrace my interpretations while being aware of the possibility of personal biases when constructing my own understanding.

### **3.5.2 Authenticity**

Authenticity (Lincon & Guba, 1985) refers to the researcher's engagement to ensure that the findings are credible, not only from the participants' experiences, but also with regard to the larger implications of research (Shannon & Hambacher, 2014). Authenticity is not only concerned with a worthy topic of study, but also with how the project has the potential to benefit society (James, 2008). The focus is on providing a *fair* picture of the different viewpoints and representing these perspectives justly. *Ontological and educative authenticity* is assessed when participants become more aware of the complexity of the social environment of the context and respect for the various viewpoints of others. Finally, *catalytic and tactical authenticity* is assessed by examining whether the research stimulated action on the part of participant and whether the potential for action favoring the participants has increased due to the research process.

During this thesis I have focused on trying to provide a fair picture of the studied context and the respondents. The role of the respondents

in the organization, as well as the level at which they are performing, is well described in each paper. I do not argue that the results are transferable to all public organizations; instead, I argue for the possibility of generalizing on the knowledge and on organizations with similar structures to those that have been studied (Morse, 1999).

As I started the data collection for Papers II and IV, several RPTAs contacted me asking to be a part of the study, indicating the practical need for this research. Due to the interest, and my role as industrial PhD student, I have had the opportunity to present the results during several seminars and workshops with participants from the studied organizations, constantly offering the knowledge found in the studies back to the participants. Further, a current collaboration with the local Regional Public Transport Authority, where the results and the method for Papers I and III are included in their long-term policy document, indicate that the research and its results are of interest to the branch.

During 2015 the Swedish Public Transport branch organization generated a national guide for creating regional transport provision programs, a mandatory long-term strategic program required in each region. Given my knowledge from the studied context, I was invited into the working group creating this guide. As such, I brought *real* information about the RPTAs into the working group and thus included the differing needs and opportunities of the various regions into the guide. Such an understanding of the conditions in the various regions changed the focus of the guide from pure metropolitan, with the understanding that all RPTAs have their own administrations, to include the situation of medium size and small regions' RPTAs, consisting of only one or a few public officials, which is the case of the majority of the regions in Sweden. As such, this research have increased the understanding of the challenges in the studied organizations.

## 4 General discussion and direction for future research

In an attempt to break down the sovereign state, the public sector became fragmented, resulting in breeding the leviathan<sup>13</sup> rather than taming it. The leviathan is no longer this sovereign beast; rather, it is the result of a lack of coordination and information processing in a complex and multilevel public sector. In this chapter I discuss how contemporary public sector breeds the leviathan. Further, I will elaborate on the challenges of regional public organizations affecting their ability to reach ambidextrous learning. This is followed by a discussion on how the leviathan of the contemporary public sector can be tamed. The chapter ends with managerial implications shedding light on the coordination challenges for regional public organizations, as well as some issues for future research.

### 4.1 Breeding the leviathan of public sector

PA, NPM, and post-NPM reforms have, to a large extent, come to represent hierarchy, market, and network. However, these reforms actually represent more than that. They include ideas, ideologies, values, tools, and culture regarding political, organizational, and administrative questions. The reforms also reflect the understanding of public organizations' roles and intention, as well as the scope of the individual organizations' intra- and interorganizational interactions.

The decades in which the NPM reform has dominated the public sector have not just brought new methods and instruments to the sphere; they have also formed ideologies and values that are based on self-centered behavior. Such culture and far-reaching vertical specialization have led to local authorities seeking to *bypass central interest* (Bache & Flinders, 2004 p. 36) to achieve their own specific objectives. Such vertical fragmentation has fostered a system of separate structures that hinder knowledge-sharing and collaboration (siloization). For long, such vertical specialization and siloization, as well as the use of market

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<sup>13</sup> The phrase *taming leviathan* has been used in many different political contexts where the state has been referred to as this great beast that must be broken down and decentralized in order for it to lose its sovereign power.

reforms which builds on opportunistic and self-centered behavior (Lægreid et al., 2014, Pollitt, 2008, Gregory, 2006), has fostered a norm that is unhealthy for public organizations and can have serious consequences for the citizens, breeding the leviathan of the public sector. As such, the contemporary public sector, building on the ideas of NPM, has created structures that hamper the efficiency and effectiveness of the public sector (Osborne, 2010; Boyne, 2002; Ferlie et al., 1996; Hood, 1995; Osborne & Gaebler 1992) – the direct opposite to the main idea of the NPM reform.

In order to connect such multi-level structure together, coordination activities and information processing between all hierarchical levels are required. At the same time, the implications of NPM have created a behavior that not only hinders information processing through the various territorial levels, but also influence the perceived need for coordination activities. This leads to the issue of an organization dependent on information processing and coordination in order to function effectively, but with structures and norms that struggles with such activities.

While some have viewed the solution to such issues through the use of network and institutional theories, focusing on horizontal coordination, others have argued that the right way to go is back to the center (Osborne, 2006; Hartley, 2010; Christensen & Lægreid, 2007; Halligan, 2006; Gregory, 2003). But is it actually possible to go back? The journey out of PA has made its mark and public organizations are no longer what they used to be in the golden days of PA. The opportunism and self-centered behavior brought by NPM have not only created different territorial levels that are shielded from each other organizationally, but have also created independent actors who have their own agenda and specific objectives focusing solely on the work of the individual department. As such, the need for each levels' holistic understanding of public organizations is gone. Therefore, we cannot go back to what it once was; we can only go forward toward a paradigm that represents today's society and its needs. The question then becomes "how"?

By stimulating the ability to learn.

## 4.2 Regional public organizations ability to ambidextrous learning

Looking back on the last year, we have learned that pandemics or demands on equality<sup>14</sup> can, in the blink of an eye, turn global society on its head and that public organizations must be able to adapt and cope. Such adaptation builds on radical and incremental changes as well as the capability to implement such changes at all levels in an organization; that is, ambidextrous learning (Benner & Tushman, 2003, Choi & Chandler, 2015)

We have learned from previous research that the creation of ambidextrous organizations is complex, and that the requirement of proximity and distance is a paradox for the creation of these organizations (March, 1991; Benner & Tushman, 1991, Tushman & O'Reilly, 1996). But is this the only reason? Based on the organizational separation of policy making and service delivery, representing separation of strategical and operative activities, in combination with the periodical nature of political term, it seems like the exploitation and exploration of regional public services can be both structurally and sequentially (Tushman & O'Reilly, 1996, Benner & Tushman, 1991, Levinthal & March, 1993; Choi & Chandler, 2015) separated. As such, it can be argued that the conditions required to create an ambidextrous organization is present and it should be able to reach ambidextrous learning.

This thesis contributes by identifying two conditions that NPM have brought to the regional public organizations that, both individually and jointly, influence the information processing and the ability for ambidextrous learning. These two conditions are referred to as *the spiral of territorial autonomy* and *the significant but concealed information of citizen needs*. These conditions affect the ability for ambidextrous learning by influencing the need for information acquiring, distributing acquired information across the different levels and finally aligning the various levels' interpretation of the acquired and distributed information (Huber, 1991).

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<sup>14</sup> I refer to the COVID-19 pandemic (WHO 2020) and the Black Life Matters movement that instigated global demonstrations (Narea 2020, Kirby 2020).

#### **4.2.1 The spiral of territorial autonomy**

If we ignore the preconditions of coordination mechanisms<sup>15</sup> and only exploring the organizational structures (Burns & Stalker, 1961; Child & McGrath, 2001) and information processing (Galbraith, 1973; Daft & Lengel, 1986; Larsson & Bowen, 1989), we find organizations that, because of their relatively flat structures, have the potential to perceive uncertainty, gather additional information and learn. In Paper II we argue that organic organizations have the possibility to perceive uncertainty and therefore have the ability to exploratory radical learning. However, when exploring the preconditions that influence the choice of structure and coordination instruments, we learn that the organizations' intention with the chosen structure or the use of coordination instruments can differ.

An example is the case of using *control transcendence* as a coordination instrument. By having the same manager for different departments within the vertical organization, *control transcendence* creates a more organic structure and a broad span of control that can, in theory, be seen as ideal based on easy information distribution and common understanding. However, grounded on the findings of preconditions in Paper IV, I argue that, based on the intentions of the individuals of the organization, such a structure might appear as self-fulfilling and introverted. This despite a first impression reflecting a desired post-NPM spirit.

Another example is strictly mechanistic organizations (Burns & Stalker, 1961) that use hierarchical coordination instruments. At first glance, these organizations might represent everything that PA and NPM have been criticized for (Hood, 1995; Aberbach & Christensen, 2005; Fountain, 2001). However, based on the intention of member agents, they can foster a way of working together over territorial levels in a pragmatic and intelligent way (Ouchi, 1980), fostering coordination through common goals and shared values. As such, mechanistic organizations that were initially considered only able to

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<sup>15</sup> That is, "the organization", "interaction potential", "coordination costs" (Alexander 1995) described respectively by *common ground and familiarity*, *attitudes and relationships between different division*, and *intentions and self-interest*.

reach limited learning can, despite their obstacles, based on their intentions, as well as attitudes and relationships between the divisions, can change the range of their behavior.

Therefore, the findings of this thesis suggest that structures and coordination instruments that were historically connected to PA and/or NPM can be used in a post-NPM spirit, creating a dynamic and enabling type of bureaucracy (Adler, 2001). As such, coordination processes (Peters, 2006) do not necessarily have a direct effect on coordination outcomes. This thesis contributes by suggesting that understanding the preconditions of coordination becomes crucial when discussing coordination and its effect on service delivery and citizens' perceived value.

Paper II shows that the vertical specialization of regional public organizations has created specialized departments that, at times, only consist of one official, resulting in organizations that do not perceive uncertainty. As such, the vertical distribution of functions and specialization have created an illusion that the organization has reached its information processing requirements and, consequently, does not need additional information. I use the words of a RPTA manager to clarify my argumentation:

*I know what the citizens want, and if I don't know, I will ask my wife.*

As comical as this may sound, it reflects the role of preconditions in influencing information acquiring and, in turn, the actual service delivery. It also gives us an understanding of how “easily” the leviathan of public sector can come to light when the need for information acquiring is not perceived. Even though the empirical data of this thesis only explores the preconditions between two levels, there are reasons

to believe that such preconditions are active at all levels.<sup>16,17</sup> As such, it is plausible that perceived uncertainty, at all levels, influences the need for additional information acquiring in order to make decisions.

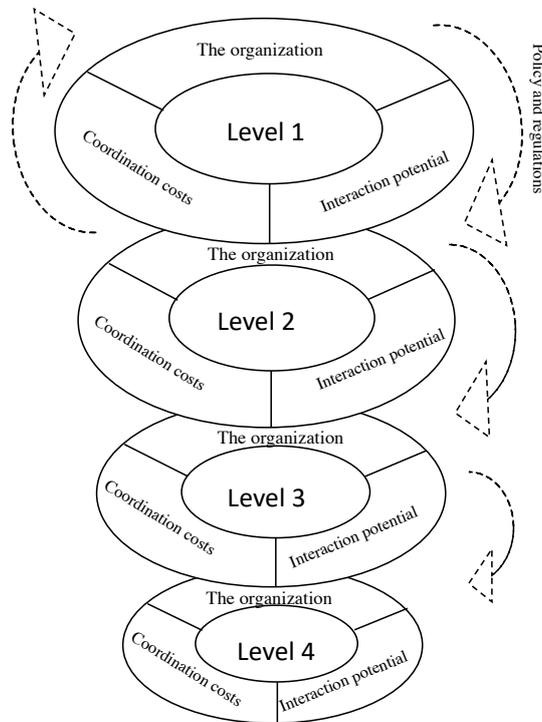


Figure 6. Regulation and policy going through the spiral of territorial autonomy.

I have thoroughly discussed the vertical fragmentation of contemporary public organization and dispersion on authoritarian decision making, indicating that despite the traditional top-down structure with laws, regulations, and policies that are pushed down the

<sup>16</sup> The political level (Level 1) refers to politicians representing the municipalities directly or to indirectly through regional/county committees. It is at this level that the overall policies and the budgets are set. The second level (Level 2) is the core of the administration and is situated directly below the political level; in the context of this thesis this is where the RPTAs are placed. The quasi-autonomous organizations are present at two levels. In the context of public transport Level 3 is assigned to *organize* the regional public transport services. These agencies are organized either as operational departments within the regional body or publicly owned companies. The quasi-autonomous organizations at Level 4, at which the actual public services are realized and performed, are organized by publicly financed private organizations.

<sup>17</sup> This is in line with the discussion that public managers can, due to a lack of motivation to learn or innovate (March, 1991), ignore the pressure according to their own motivation and biases (Moynihan & Levartu, 2012). Given the complex structure of public sector, such incongruity might be added at all levels.

different levels in the organization, each level has its own territorial autonomy. As such, one could assume that each level have their own preconditions. Figure 6 shows that preconditions of coordination mechanisms (Alexander, 1995) influence coordination instruments and are active at each level, ranging from policy and regulation to service delivery.

For instance, in one of the cases studied in Papers II and IV, the policy document executed by the RPTA was studied. As we recall from these papers, the policy document is supposed to create the long-term strategic development for the public transport in the region. The document study revealed that the quasi-autonomous organization at Level 3 had created a strategic document covering the same timeline as the one created by the RPTA. However, this strategic document had significantly different strategies and objectives for the same public transport service. Such a finding supports the argumentation that each level interprets the policy documents that seep down from a higher level based on their own preconditions. This example shows that such territorial interpretations and goal-incongruence can affect the prevailing coordination activities and differ from the ultimate coordination activities, if they had been designed by an organization designer. Based on the possibility of goal-incongruence among the various levels within public organizations, I find the definition of Quinn and Dutton (2005) usable when discussing coordination in regional public organizations: “Coordination is the process through which people arrange action in ways that they believe will enable them to accomplish their goals” (Quinn & Dutton, 2005, p. 36).

#### ***4.2.2 The significant but concealed information of citizen needs***

Having discussed the individual goals and intentions at the territorial levels influencing coordination activities, I now return to the main goal of public organizations: to focus on efficiency and effectiveness. It has been claimed that the general goal of public sector is to efficiently meet citizen needs at the same time as reaching sustainable societal and environmental goals (Mokonyama & Venter, 2013). Using Quinn and Dutton’s (2005) definition of coordination above, together with the

general goal of public sector, I argue that the overall coordination goal in regional public organization should be to *arrange action in a way that enables the organization to efficiently meet citizens' needs, while at the same time reaching sustainable societal and environmental goals*. An important aspect then becomes the feeding of the organization with information on citizens' needs and how the fulfillment or non-fulfillment of these needs affects public value.

For instance, in the context of this thesis, the overall goal of the national Public Transport Regulation is to attract more users in order to increase public travelling, as increased public travelling is considered to increase public value by having positive effects on individual mobility, societal economic activity, and the environment (Meligrana, 1999). As such, understanding how achievement of various quality attributes identified in Papers I and III can influence the relevance and preference of public transport can have a crucial effect on public value.

The findings of Papers I and III show that user preferences are dynamic and change over time. The life cycle changes identified in Paper III – following *successful life cycle* as suggested by Kano et al., (2001) going from indifferent to must be – show that life cycle ideas, mainly used within the private sector, are applicable. However, Paper III also shows life cycle change moving in the opposite direction than the *successful life cycle*, indicating more complexity in the life cycle than identified in the private sector. This indicates that, given the nature of public services, quality attributes and citizen preferences are influenced by societal changes<sup>18</sup>.

This thesis rests on the notion that the general goal of the public sector is to efficiently meet citizen need, while at the same time reaching sustainable societal and environmental goals (Mokonyama & Venter, 2013). Hence, information about the changing citizen needs, as well as societal changes, becomes crucial for all levels of public organizations, ranging from policy creation to implementation. Therefore, such

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<sup>18</sup> In paper II, we argue that the political agendas, the importance rating of environmental issues in various public budgets, the massive reports, and media focus on the global warming may have caused changes in the citizens' attitudes and increased the number of public transport stakeholders.

information about the citizens, typically recognized and gathered by the level delivering the service, should be distributed across all levels of the organization.

However, information distribution requires the *need for* information distribution across territorial levels, as well as structures and communication paths that allows such distribution. We have learned from the development of coordination studies in organization theory that while early coordination research emphasized the structure for optimal performance (Fayol, 1949; Taylor, 1916; Jacoby, 1984; Chandler, 1962; Hickson et al., 1969; Thompson, 1967; Stover, 1970; Woodward, 1970), contemporary research focuses more on the coordination activity per se rather than the optimal structure (Faraj & Xiao, 2006; Heath & Staudenmeyer, 2000; Ballard & Seibold, 2003; Malone & Crowston, 1990). This is because the contemporary coordination research assumes that different departments in an organization must coordinate work efforts independent of organizational design in order to finalize the work. However, the structures created in the notion of NPM with non-overlapping task specializations and the sense of territorial autonomy have sometimes gone so far that coordination, in order to finalize the work of each level, is not necessary.

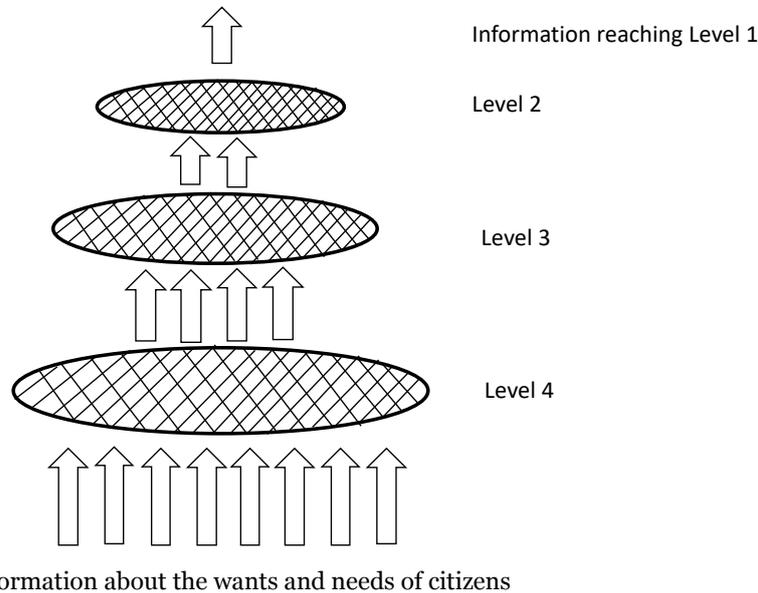
Furthermore, given the ideologies and values brought by NPM (Osborne, 2010; Lodge & Gill, 2011; Christensen, 2012), I argue that in the same way that policy and regulations must struggle to find a way down the *spiral of territorial autonomy*, information about the want and needs of the citizen going upstream in the organization will meet the same obstacle based on the same preconditions hindering information distribution. As such, the preconditions identified in this thesis not only influence the perceived need for information distribution, but also the will to do so. However, individual preconditions,<sup>19</sup> together with prevailing structures<sup>20</sup> in contemporary

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<sup>19</sup> Such as personal intentions and self-interest, as well as the common ground, familiarity, attitudes and relationships among different divisions.

<sup>20</sup> That is, single-purpose organizations with specific and nonoverlapping roles and functions.

public sector, do not include the task interdependence required to justify or encourage information distribution.



*Figure 7. The structural filter of information on citizens' needs.*

Thus, information sharing upstream between the different levels may be perceived as a threat (Alexander, 1995) to their territorial autonomy and control of valuable information. As shown in Figure 7, information, when distributed, may be filtered at each level based on the interest of the level. These information filters might hinder information about the changing wants and needs of citizens to reach Level 1, which is the level of regional public policy creation. Such a structural filter of information on citizen needs will not lead to higher-level learning, as additional levels might be hindered from obtaining the acquired information and recognizing it as useful (Huber, 1991).

### 4.3 The effect of individual preconditions on ambidextrous learning

The results of this thesis indicate that individual preconditions affect the design of regional public organizations. As such, regional public organizations' distribution of roles and responsibilities, as well as formal and informal communication channels, are based to some extent on individual preconditions rather than being designed purely to meet their information processing requirements (Galbraith, 1973). Accordingly, I argue that such preconditions<sup>21</sup> affect the ability of regional public organizations to respond, through radical and incremental changes, to changing citizen needs.

As such, the question of an ambidextrous organizations (Tushman & O'Reilly, 1996; Levinthal & March, 1993; Choi & Chandler, 2015) is not just a theoretical paradox, but is also influenced by preconditions colored by politicians' and officials' personal intentions and self-interest, as well as the common ground, familiarity, attitudes, and relationships among different divisions. The effect of such preconditions on ambidextrous learning can be seen in both *the spiral of territorial autonomy* and *the significant but concealed information of citizen needs*. The former affects the potential for ambidextrous learning by influencing the need for information acquiring and the latter affects the need and desire to distribute the acquired information across the different levels. Finally, these two conditions, jointly, influence the ability to align the various levels' interpretation of the acquired and distributed information.

Strategic integration as well as conscious and deliberate considerations are required in order to actually become exploitative and explorative ambidextrous (Benner & Tushman, 1991). Therefore, the findings of this thesis indicate that, based on the multi-level interpretation of the mission and policy along the levels, as well as the filter of information regarding the changing needs of citizens, the information processing that is required in order to reach ambidextrous learning in regional public organizations is hindered. Even if both types of organizational

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<sup>21</sup> That is, politicians' and officials' personal intentions and self-interest, as well as the common ground, familiarity, attitudes, and relationships among different divisions.

learning would be present at different levels (as a result of the organizations' structural separation and different levels' information acquiring), the lack of deliberate efforts and integration of exploration and exploitation may lead to costly and ineffective public service.

Despite the presence of exploratory learning<sup>22</sup>, such learning is insignificant if it cannot be strategically integrated (Benner & Tushman, 1991) and accepted within the entire organization. As such, without strategic integration among levels, an organizational change that increases the public value cannot be infused. For instance, this can be the case when organizations, based on new information, focus on radical innovations and fulminant policy documents without integrating or supporting the implementation of such ideas in the organization. In the same way, even if exploitative learning is present at lower levels, such learning is scant if it is not supported by policy and funding. Therefore, in order to contribute to public value, the learning activities must be coordinated and implemented on all levels in the organizations.

#### **4.4 Taming the leviathan of the public sector**

Citizens' needs are changing (Fernandes & Pacheco, 2017). It is no longer just resource efficiency that is required, but also that the public sector focuses on the heterogenous needs of citizens, as well as sustainability and justice. As such, focusing solely on efficiency is no longer enough when creating public value.

Such shifts in citizen needs force public reforms and the paradigm of public services to change. Changing needs invoke changing pressure on public organizations. To address this, researchers have, during the last 20 years, suggested a second-generation reform (Bogdanor, 2005; Hood, 2005; Six, 2005; Osborne, 2009; Gregory, 2003; OECD, 2005; Christensen & Lægheid, 2007; Christensen & Lægheid, 2011, 2012),

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<sup>22</sup> Which facilitates the ability to adapt to dynamic and unpredictable, complex, ever-changing environments (Danneels 2002; Eisenhardt & Martin 2000; McGrath 2001; Teece et al. 1997), and creates knowledge of service attributes that makes all other modes of the service irrelevant.

largely based on structural, functional and institutional perspectives (Jun, 2009).

However, a contribution of this thesis is the identification of inherited preconditions, indicating that the outcome of reform changes is based on more than structural and functional aspects. It is also a matter of individuals' own ideologies (in this case for instance the civil servants own ideologies), values, and practices. Thus, at the same time that the stated reform is offering its own paradigmatic assumptions,<sup>23</sup> the outcome of the reform is colored by inherited values and ideologies. Therefore, such structural and functional paradigmatic assumptions are interpreted based on individuals preconditions. Such preconditions then influence what coordination instruments to use and how to use them. This means that there is an imminent risk of inconsistency between ideologies and values, versus guiding regulations and rules present.

Due to the prevailing assumptions that are often used in public management, that people act rationally and in accordance with policy and structures (Jun, 2009), such inconsistency might be neglected. By focusing solely on the structures and functions in the time-current reform, we risk missing aspects that influence the organization and its coordination outcome and, in turn, the citizens.

For instance, as in the case of child psychology presented in the introduction, the care provider at the implementation level acted based on the agreement with the region, albeit with a focus on the own private organization and the efficiency requirements. The vertical fragmentation and siloization lingering in the wake of NPM infers continued responsibility limits to the frame of the departments' specialization. As such, managers or administrators are being held responsible for their action (Cooper, 1998; Cuncliff & Jun, 2005), but only within their own organizational level or department. Hence, the care provider acted responsibly, but only within its own organizational

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<sup>23</sup> Regulations and rules guiding the way for organizational structures, role distributions, coordination mechanisms and instruments to use in order to function within the frames of the time-current optimal reform.

boundary and not to the citizens, resulting in the public service not reaching its goal of satisfying user needs and not reaching public value.

Regional public organizations must organize in order to adapt to contemporary regulations forcing structural and functional changes. However, there are inherited ideologies, values, and practices that might hinder the intended outcome. As such, reform changes are not only about structures or instruments, but also about the understanding of public organizations' roles and intention, as well as the scope of the individual organization's norms. Therefore, coordination processes (Peters, 2006) do not necessarily have a direct effect on coordination outcome. From an outside perspective, creating structures that are inconsistent with practices might be seen as window-dressing. However, this thesis implies that the regional public organizations are – given imposed structures and functions implied by the previous reforms and based on their ideologies, values, and practices – trying to accomplish a service that create true public value.

Resting on Bouckaert et al. (2010) argumentation that the core problem of vertical coordination is interaction between individuals, I argue that vertical coordination cannot be controlled purely based on structures and functions. Hence, despite its normative flavor, it seems that the core solution is interaction between individuals. More specific, interactions between individuals with focus on interorganizational activities to bridge the gaps created by vertical specialization. To once again tame the leviathan of the public sector, we must acknowledge the influence of the evolution of public sector and all of its empirical experiences that fosters its ontology. That is, we must understand the different generations of public reforms and their footprint on ideologies and values influencing regional public organizations' ability to meet citizens' needs and create public value.

#### **4.5 Managerial implications**

The main managerial implication of this thesis is to provide a framework that helps regional public organizations to expand their understanding of their coordination challenges and offer suggestions

to approach these challenges. Below, I will elaborate on the implication that this thesis has for regional public organizations.

This thesis contributes more knowledge of the varied circumstances in regional public organizations and sheds light on their coordination challenges.

- Regional public organizations' multilevel structure impacts public policy implementation. As such, policy documents do not just need to be created; instead, they must be integrated at all of these levels if it is to matter in public value creation.
- Given the multilevel structure, public policies are interpreted at different levels.
- Each level's policy interpretations are based on individual preconditions. These preconditions are politicians' and civil servants' individual ideologies, self-interest, as well as attitudes and relationships between different divisions.
- Despite each level's intention to create public value, these various interpretations might result in goal incongruence and cooperation problems.
- Acknowledge the importance of information about changing citizen needs in order to create sustainable policies.
- Information about changing citizen needs might – based on individual preconditions – be filtered as it is distributed through the various levels. As such, efforts should be made to find new innovative ways in which information about citizen needs can inform public policy without being filtered.
- Incremental changes at the service delivery level, aiming to improve the service, are not enough to fully cope with changing citizen needs.

- Fulminant policy documents, suggesting radical changes in the public service, are not enough to change the service without integrating or supporting the implementation of such ideas in the organization.
- Given the structure of contemporary public sector with territorial autonomy, the various levels are more or less independent. As such, it is not enough to focus on the organizational structures and the hierarchy in order to reach coordination and cooperation; instead, focus must be put on creating common ground among the various levels.
- Common ground-building activities should also focus on personal aspects, rather than only on structural and functional aspects. This can be done, for instance, by designing a context and a community that has actual relevance for the service user that the involved individual can understand.

This thesis has created an understanding for the impact of individual preconditions on vertical coordination and its effect on the ability of regional public organizations to adapt to the changing needs of citizens. With these individual preconditions in focus, I argue that coordination of regional public organizations is about interactions between individuals. As such, the problem of vertical coordination is a matter of interaction between individuals and therefore cannot be solved only using regulation and policy documents in order to bring the different levels together.

There are no quick fixes to change ideologies of reforms that have dominated the sector for a long time. Instead, regional public organizations must act holistically and long-term in order to place the changing needs of citizens in focus and tame the leviathan.

## 4.6 Future research

Based on the above, I suggest three issues for future research that may contribute to the discussion of contemporary regional public organizations. These suggestions are made considering the complexity of public service systems, in which multiple interdependent and independent actors and stakeholders act laterally and at different levels.

### *The first issue for future research*

Specialization in regional public sectors includes not only vertical specializations as explained in this thesis, but also horizontal specializations with specific tasks at the same administrative and hierarchical level. Accordingly, regional public organizations are governed based on various interdependent policies. It has been argued that horizontal coordination is required in order to create greater coherence, and to reduce redundancy, gaps, and contradictions within and between policies (Peters 1998). Based on the understanding of preconditions that influence vertical coordination, it is of interest to investigate what and how preconditions of coordination influence horizontal coordination outcome.

### *The second issue for future research*

This thesis argues that inherited ideologies, values, and practices influence the interpretation of the structures and functions of the time current reform. As such, there is a risk of a mismatch between the structures and functions, as well as the ideologies and values. Given this risk, it becomes relevant to explore how such ideologies and values can be processed in order to increase their capability to create public value. The question then is whether inherited ideologies, values and practices based NPM practices can be processed in order to better fit the structural and functional aspects in a post-NPM era.

### *The third issue for future research*

It has been argued that the ultimate goal of public sector policies is to create public value and comply with citizen's needs. Based on the results of this thesis – that citizen needs are dynamic and ever-changing – an issue for research is how changing citizen needs can

come to inform the policy, coloring the vertical organization. As such, it is a question of policy creation as well as service delivery. Additional research is required in order to develop and design more dynamic systems that can capture the changing needs of citizens.

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# What happened with the leviathan of the Public Sector?

For long, private-sector managerial techniques of organizational resources have been applied to the public sector, with the assumption that the application of these techniques will improve the efficiency of public service. The use of these techniques has resulted in a “patchwork quilt” of various public and private actors acting on several territorial levels. Such structure has resulted in vertical specialization where tasks and responsibility are divided with narrow field of competencies creating a fragmented organization that is dependent on information processing and coordination.

This thesis elaborates on the coordination challenges brought by the devolution of functions and specialization in the vertical organization. It was found that despite the efforts to meet the recognized efficiency problems, public sector has created organizations that are dependent on information processing and coordination in order to function effectively, but with a structure and norms that struggles with such activities. The leviathan of the public sector is no longer constituted by a sovereign state but by the effect of the lack of communication between the various levels of a fragmented and complex public organization. Despite its normative flavor, this thesis elaborates on why it appears that the core solution of vertical coordination might be increased focus on interaction between individuals.

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