Governance Coordination Capacity and Quality
Does Wicked Policy Areas Matter?

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Summary

Based on a study of civil servants in the Norwegian central government, this article describes perceptions of coordination quality along the vertical/horizontal and internal/external dimensions as well as overall perceived coordination capacity. Second, it examines to what degree the variations in perceived coordination quality and coordinating capacity can be explained by structural and cultural features. In particular it focuses on the significance of wpicked policy areas. The data base is a survey of civil servants in Norwegian ministries and central agencies conducted in 2016. A main finding is a complex picture concerning the importance of wicked policy area, with similarity in coordination perception patterns, but also variety among the three wicked areas of climate change, immigration and police. The overall variation in perceptions of coordination capacity and quality is primarily related to cultural factors, such as mutual trust, level of conflict and identification with central government. But some structural features, such as administrative level, also have an effect.

Introduction

Governments across the world are struggling to deal with 'wicked policy problems', such as climate change, immigration and crime (Head 2018). The question of how to address 'wicked problems' has been around since Rittel and Webber published their seminal article (Rittl and Webber 1973) and the debate on this issue has now moved beyond the different dimension that they defined 40 years ago. Brian Head (2018) argue for closer links between the wicked problems literature and policy studies.

Wicked issues are often seen as related to behavioral theories, while the focus in this article is on structural and institutional types of theories. Accordingly it is natural to focus on the New Public Management reform wave, with its emphasis on structural vertical and horizontal specialization, resulted in fragmented government apparatuses, thus aggravating thewicked issues problems (Pollitt and Bouckaert 2017). Wicked problems pose highly complex and ambiguous policy planning and development challenges and also raise implementation and service-delivery problems that cannot be solved within one sector or by one administrative level alone, but require coordination between different actors, organizations and levels (Head and Alford 2015; Lægreid and Rykkja 2015). In addition, they are often highly contested and debated policy areas, characterized by disagreements on the definition of problems and solutions and multiple actor negotiation processes, which may result in more or less ambiguous compromises (Cyert and March 1963, March and Olsen 1983, Wilson 1989). This alludes not only to structural design problems, but to institutional aspects of legitimacy.

This article investigates coordination measures in the Norwegian central government apparatus with a special focus on the areas of climate change, immigration and the police. We examine what characterizes government coordination measures within these policy areas, how one can explain them, how they function, and what the consequences for governance capacity are of introducing novel coordination tools alongside existing ones.

The article highlights the importance of organizational capacity, often controlled by the leadership, by addressing coordination capacity. It also underscores the relevance of structural features as well as governance legitimacy by examining the effect of identity, levels of conflict and trust relations on such coordination arrangements. Capacity and legitimacy are closely connected, because high capacity may enhance legitimacy, or vice-versa: a high degree of legitimacy may make it easier to handle capacity questions (Christensen, Lægreid and Rykkja 2018). The core argument is that institutional contextual features at country- and sector-level affect coordination practices.

The main dependent variables used are coordination capacity and various measures of coordination quality as seen by civil servants in their own field of work. Both vertical and horizontal coordination and internal and external coordination will be addressed as well as the perceived overall administrative coordination capacity.

The main research questions posed are:

- How do civil servants assess coordination quality along the vertical/horizontal and internal/external dimensions and how do they perceive overall coordination capacity?
- Are perceived coordination capacity and quality different in the wicked policy areas of climate change, immigration and police compared to other policy areas? Are wicked areas similar concerning these perceptions?
- To what degree can structural and cultural features explain the variation in perceptions of coordination quality and overall coordinating capacity?

Our data are taken from a survey of civil servants in the Norwegian ministries and central agencies conducted in 2016.

We will start by clarifying our core concepts and our theoretical approach. Second, we will give an outline of the Norwegian context. Third, we will describe our data sources. Fourth, we will present our empirical findings. Fifth, we will discuss the findings in relation to the theoretically derived expectations. Finally, we will sum up the main findings and draw some conclusions.

Conceptual clarification and theoretical perspectives

Wicked issues

Wicked issues are often non-resolvable owing to their chronic nature, the lack of clear and easy solutions (Rittel and Webber 1973: 163) and the involvement of multiple transboundary actors from different policy areas, often with different and challenging problem definitions (Danken 2017). Wicked issues are thus complex, transcending policy areas and administrative levels, and are characterized by uncertainty about means-end relations and by ambiguity regarding goals and values (Head 2018; Lægreid and Rykkja 2015), These multifaceted policy problems defy simple solutions and straddle the boundaries of organizations and ministerial areas of responsibility as well as administrative levels (Lægreid et al., 2015). Wicked issues present both political problems and policy problems for government (McConnell (2018). Actors involved in

tackling wicked problems often have a feeling that they are handling problems more than solving them and interacting with the same stakeholders over a long period of time (Brunsson 1989; March and Olsen 1976). By definition, a wicked problem has no optimal solution, but more or better collaboration and coordination is often seen as a key precondition for governments to address complex governance challenges and hence as a way forward (Head and Alford, 2015).

Coordination – core ideas, perspectives and expectations

Coordination can be defined as the purposeful alignment of units, roles, tasks and efforts in order to achieve a predefined goal (Bouckaert, Peters and Verhoest 2010). Coordination is about adjusting the actions and decisions of interdependent actors to achieve specified goals (Koop and Lodge 2014). Thus, we regard coordination both as a process and as an output. In this article the dependent variable is the perceived quality and capacity of coordination efforts along different dimensions.

We distinguish between *internal* and *external coordination* and between *vertical* and *horizontal coordination* (Christensen and Lægreid 2008: 102). Internal coordination refers to coordination in and between government actors within the central government, whereas external coordination refers to interaction between the government and organizations or stake-holders outside it, e.g. civil society, international organizations or municipalities. Combining these dimensions four forms of coordination are focused: First, horizontal-internal coordination, which refers to coordination between different departments, agencies or policy sectors on the same level. Second, vertical-internal coordination, which involves coordination between the parent department and subordinate agencies and bodies in the same sector. Third, vertical-external coordination, which refers to coordination between the government and upwards towards international organizations or downwards to local government. Fourth, horizontal-external coordination, which denotes coordination between the government and civil society organizations and private sector organizations. In addition, we apply a variable that taps perceived general administrative capacity, i.e., getting actors to collaborate and cooperate within the respondent's own field of work.

Choosing between different means of coordination entails prioritization, but each means carries different risks, such as increasing complexity and hybridity. Wicked problems involve a risk of 'coordination underlap' (Koop and Lodge 2014) – i.e., when a particular policy issue falls between the boundaries of different government organizations it can become a

responsibility of none. Or it might involve 'coordination overlap', when a policy issue is of relevance to several different organizations and all of them want to be involved in policy making. The three selected policy areas represent different mixtures of 'overlap' and 'underlap' (Wegrich and Stimac 2014).

Coordination is often considered as a workable solution to wicked problems and a potent remedy for a lack of capacity and legitimacy in the public sector (Head and Alford 2015, Lægreid et al. 2014, 2015). Such problems intensify the need for contingent coordination, collaborative governance and network approaches (Ansell and Gosh 2008, Kettl, 2003). Climate change, crime and immigration are typical examples of wicked issues. These issues demand interconnected administrative responses.

We will apply a *structural-instrumental perspective* and a cultural-institutional perspective to understand the variations in perceived coordination quality and capacity. According to the structural-instrumental perspective, decision-making processes in public organizations are either the result of strong hierarchical steering or of negotiations among top political and administrative leaders (March and Olsen 1983). The formal structure of public organizations will channel and influence the models of thought and the actual decision-making behavior of civil servants (Egeberg 2012, Simon 1957).

Luther Gulick (1937) stressed the dynamic relationship between specialization and coordination: the more specialization there is in a public organization, the greater the pressure for increased coordination or vice versa. The challenges of 'coordination by organization', his main type, are also qualitatively different depending on whether the structural specialization are based on purpose, process, clientele or geography (Egeberg 2012).

This perspective offers insights into variations in how coordination is experienced in different policy areas and among officials performing different tasks, in different positions, and at different administrative levels and in different coordination arrangements. The argument is that these diverse formal features affect how internally or externally directed their work is, how technical or non-technical their tasks are, the number and type of stakeholders, etc.

Based on this perspective, we apply five different explanatory variables. First, we distinguish between *policy areas* according to their degree of wickedness. More specifically, we address the fields of climate, immigration and the police as examples of wicked policy areas in contrast with other policy areas. This includes civil servants in the Ministry of Climate and Environment, the immigration, integration and police departments in the Ministry of Justice and Public Security, the Norwegian Environmental Agency, the Directorate of Integration and Diversity, the Norwegian Directorate of Immigration and the Police Agency. One expectation

(Policy Area 1) is that civil servants in these ministries and agencies will perceive coordination capacity and quality as worse than civil servants in other parts of the central government, owing to the constraints imposed by the principle of ministerial responsibility. We would expect horizontal coordination and coordination across administrative levels to be especially problematic, based on problems with capacity, span of control and excess slack (Cyert and March 1963; Gulick 1937).

Another, contrasting expectation (Policy Area 2) is that these ministries and central agencies have been assigned coordination responsibilities that straddle policy areas and administrative levels, and additional resources, which works in practice and gives them better coordination capacity and quality than the regular line ministries and agencies. These features could be furthered by policy saliency and attention (Wilson 1989). A third possibility (Policy Area 3) is that the principle of ministerial responsibility and the cross-boundary coordination assignments will counteract one another in practice and result in no significant variation between the different policy areas.

Second, we distinguish between *administrative levels*. Here the expectation is that the coordination capacity and coordination quality will be perceived as more positive in ministries than in central agencies. This is due to the strength of the principle of ministerial responsibility and available resources for coordination by hierarchy, which will favor ministries (Christensen and Lægreid 2008). Especially we will expect that this will be the case when it comes to coordination capacity and internal coordination quality within own policy field.

Third, we examine the effects of *tasks.* The expectation is that civil servants who have coordination as their main task or who work with tasks and matters that require collaboration across administrative levels and ministerial areas will face more coordination problems than other civil servants, especially when it comes to transboundary coordination. This may reflect capacity problems and problems of control (Gulick 1937).

Fourth, we would expect participating in *network arrangements* to make a difference. Inter-organizational groups, forums and boards are coordination arrangements that are supposed to enhance coordination quality and the expectation is that civil servants participating in such units will report better coordination quality than other civil servants.

Finally, we would expect variations according to *position* in the hierarchy. Leaders have more responsibility for organizing and furthering coordination and they are therefore likely to see coordination differently to executive officers lower down in the hierarchy (Egeberg 2012). This leads to a general expectation that leaders will score highest in their positive evaluation of

a broad range of coordination forms but also have a relatively high score on particularly demanding types of coordination.

The **cultural-institutional** perspective views the development of a public organization as based on historical traditions, path-dependency and informal norms and values (Selznick 1957, Krasner 1988). Actors will think and act according to a logic of appropriateness, not one of consequence (March 1994). Coordination in a cultural sense might mean developing a common culture, so that civil servants and their leaders share informal norms and values, which may in turn facilitate actual coordination. This way of thinking is reflected in the concept of "value-based management" (Halligan 2007). NPM meant increased structural fragmentation, but also cultural fragmentation, and a challenge for leaders under the post-NPM reforms has been to bring public organizations culturally back together again (Gregory 2003).

We will use three different sets of cultural variables to explain variety in civil servants' experience of coordination. First, a central precondition for working together in the civil service is *mutual trust*, so in this case we aim to find out whether civil servants think the level of mutual trust between the ministry and subordinate agencies is high or not. Our expectation is that a high level of mutual trust will enhance coordination quality (Rhodes 1996). The second variable is whether the civil servants' tasks and areas of responsibility are characterized by a high or low level of *conflict* (Wilson 1989). The expectation here is that a high level of conflict will make coordination more difficult and challenging. The third variable is *identity* (Selznick 1957). The expectation here is that civil servants scoring high on identification with the public administration as a whole will perceive higher coordination quality than those who mainly identify with their own department or ministry. This applies especially to inter-organizational coordination.

Coordination challenges in climate change, immigration and crime

Levin et al. (2012) see *climate change* as a 'super wicked' problem. There is no strong central authority coordinating efforts to combat climate change. Climate change policies are characterized by conflicting objectives and means-end thinking in adaptation and mitigation, not to mention the effects of structural and policy instruments. The issue transcends structural and functional boundaries and administrative and organizational levels and policy areas, creating a crucial need for coordination across levels and sectors and between actors (Rykkja, Neby and Hope 2014, Jaegers et al. 2003). It involves several policy areas with potentially conflicting goals, e.g. environmental and energy policy, transportation, infrastructure, agriculture, health, etc. This is evident in the Norwegian Climate Agreement, which received

broad political support across established political dividing lines. Some researchers highlight the network characteristics of the climate policy field, where policymakers, stakeholders, regulatory bodies, civil society and academic communities interact in an unusually complex manner (Sygna et al. 2013).

The issue of *immigration* is also extremely politically salient, reflecting global shifts in conflict patterns and in economic and political conditions as well as in the attention of the media and various stakeholders (Gievens and Luedtke 2005). It is cross-sectoral, with links to welfare policy, foreign policy, healthcare, education, housing policy, security and more, and involves public authorities at the local, national and international levels. The tension between societal considerations and individual cases is important and involves decision-making on different levels and in different policy areas that balances discretion related to rules and laws. This policy area is also very sensitive to crises and sudden events threatening international regimes and challenging domestic coordination, as experienced with the 2015 refugee crisis in Europe (Myrberg 2018). In Norway, the coordination of immigration control and integration policy is a main challenge, which to a great extent has been allocated to different authorities and administrative levels (Christensen and Lægreid 2009).

Police disregards sector challenges, and police work demands involvement and collaboration of many different sectors and policy areas: the immigration and integration authorities, the military, the customs authorities, local emergency units, the court system, the correctional services, the justice authorities, child protection authorities, health and welfare authorities as well as civil society organizations. The Norwegian *police* has been criticized for inadequate coordination between administrative levels, regional subdivisions and with other sectors, as shown during and after the terrorist crisis in 2011 (Christensen, Lægreid and Rykkja 2015). The ongoing Norwegian police reform focuses on structural arrangements through merging and centralization.. However, decentralization might be necessary to enhance community policing, to maintain the civil character of the police and proximity to citizens. A core challenge for coordinating the police is how to balance partly conflicting values such as purposefulness, resilience, fairness and efficiency, combining cultural and structural measures.

The three policy areas face both internal and external coordination challenges. All three policy areas involve key coordination challenges – horizontally, among ministries or central agencies, and vertically, between ministries and central agencies, central and local government, and national bodies and supranational bodies as well as with civil society.

But there are also significant variations between the three different policy areas regarding the degree and scope of wickedness, which might lead to problems when putting them

into one category. There might be variations related to complexity, uncertainty and ambiguity, and also to the regulative, normative and cognitive features of the policy fields (Scott 2013). Climate change is by some considered an ultimate wicked problem field (Pollitt, 2016). In the climate field in Norway, the administrative bodies for handling climate issues are not concentrated in the Ministry for Climate and Environment and the Environment Agency but fragmented and spread out across a wide range of quite diverse ministries and agencies (Neby and Zannakis 2018). It is also a rather new policy area and more science-driven. In contrast, the police is a more mature, settled and old policy field and more administrative concentrated and with stronger administrative culture than the climate field. The field of immigration is characterized by a lot of reorganization (Christensen and Lægreid 2009) and was also in the mid of an immigration crisis when the survey was conducted.

Context

Norway is a unitary state with a decentralized political and administrative system. It has a large public sector and the level of mutual trust between central actors and public-sector organizations is generally high. Two governance doctrines are central. First, the principle of *ministerial responsibility,* which tends to enhance vertical coordination within policy areas, but constrains horizontal coordination between them. It is very effective when the problem structure follows the organizational structure, but not so when it comes to wicked problems. Thus, problems of pillarization, departmentalization, tunnel vision, and silo attention will be core challenges for handling wicked issues in the areas of climate, immigration and police (cf. Pollitt 2003). Some ministries, such as the Ministry of Climate and Environment, which is broadly responsible for environmental questions and the Ministry of Justice and Public Security, which in 2016 had responsibility both for the police and for immigration and integration issues, have some coordination tasks across ministerial areas, but they struggle to fulfill their role as overarching ministries.

The second governance doctrine is *local self-government.* While this may enhance coordination within each local municipality, it risks producing multi-level coordination challenges between local and central government. There are elected bodies at both local and regional level and these are expected to make their own local policy without too much interference from central government. At the same time, they are, like regional/local branches of central agencies, also supposed to implement policies coming from central government.

In recent decades, two development features in the Norwegian central government have affected the coordination pattern. First, the 'NPM era' involved vertical specialization and the creation of more semi-independent agencies, but also increased horizontal specialization, leading to structural and cultural fragmentation (Pollitt and Bouckaert 2017). Performance management was introduced, which mainly addressed vertical coordination within each ministerial area and did not have much to offer to enhance horizontal transboundary coordination. The result was often a mismatch between organizational structures and problem structures, which is typical for wicked problems.

Second, Norway's integration in the European Union through the Economic Area Agreement has increased the need for horizontal coordination and for a unified Norwegian position to be formulated on various policy issues. To facilitate this, eighteen special overarching committees have been established covering both ministries and agencies and different policy sectors. The members of these committees are civil servants in the affected ministries and agencies.

This context illustrates the special challenges that civil servants in Norwegian ministries and central agencies face when handling and assessing coordination issues. In the Norwegian case a number of changes in government have made coordination more difficult and there is an increasing demand for both horizontal and multi-level coordination.

Data base

The empirical data in this article are based on a survey of Norwegian civil servants conducted in 2016. At the ministry level the total population of all civil servants in all ministries with at least one year tenure, from executive officers to top civil servants, were asked. In central agencies a sample of every third civil servant with the same tenure, randomly selected, was included. A total of 2322 employees in the ministries and 1931 in the central agencies answered the survey. The response rate was 60 per cent in the ministries and 59 per cent in the central agencies, which is overall in international comparison is a very high response rate.

The dependent variables.

We distinguish analytically between coordination capacity on one hand and the coordinated quality on the other hand. By coordination capacity, we mean the administrative capacity within the civil servants fields of work when it comes to get actors to collaborate and to cooperate (Lodge and Wegrich 2014). It includes formal structural and procedural features of the administrative apparatus aiming at bringing together disparate organizations to engage in

joint action. Coordination quality, on the other hand, is the perceived quality of the actual coordinating activity as it works in practice within the civil servants field of work along different dimensions.

Thus, our dependent variables regarding coordination – the first measuring coordination capacity and the second coordination quality – were based on the following questions:

- *How do you assess the administrative capacity of the public administration within your field of work regarding getting actors to collaborate and cooperate?*

The respondents were asked to choose between five options ranging from 'very good' to 'very poor'' and including a 'don't know' category

- *How would you characterize coordination within your field of work along the following dimensions:*
    a. Coordination between different government authorities within your own ministerial area
    b. Coordination with government actors in other sectors
    c. Coordination with regional and local government
    d. Coordination with supranational or international organizations
    e. Coordination with the private sector/civil society

On each dimension, the respondents were asked to choose between five options, ranging from 'very good' to 'very poor' and including a 'not relevant' category. Only civil servants in ministries were asked the question about the last dimension, coordination with the private sector/civil society, so the responses to that question are not quite comparable with the responses on the other dimensions.

The independent variables.

The structural variables include administrative level, policy area, position, network arrangements, and coordination and collaboration tasks. Regarding *administrative level*, we distinguish between ministries and central agencies. *Position* varies from low, meaning executive officers and advisors, to middle managers and top civil servants. *Policy field* denotes the transboundary wicked areas of immigration, climate change and the police as opposed to other policy areas, or else the three policy fields differentiated. *Network arrangements* is an additive index of participation in external working and project groups, horizontal across policy area, and vertical both upwards to the international level and downwards to the local and regional level as well as participation in public commissions during the last year. The *coordination tasks* variable concerns whether coordination is a main task or not. *Transboundary*

collaboration is the degree to which civil servants work in areas or on issues that demand collaboration across administrative levels and/or policy areas.

The cultural variables include level of conflict, mutual trust relations and identification with central government. The *level of conflict* is based on a question about whether civil servants assess their own field of work as characterized by a high or low degree of agreement. *Mutual trust* is based on a question where civil servants were asked to rate the level of mutual trust between the ministry and agency on a scale from very good to very poor. *Identification* is based on a question about whether they rate their own affiliation and identification with the central government administration in general as strong or weak.

Main results.

Coordination capacity and quality

Overall, perceptions of coordination quality are rather mixed (Table 1). Only 54 per cent report that it is good or very good in their own policy area. Assessments of coordination quality also vary along the different dimensions. It is perceived as rather good within own policy area but quite poor across policy areas and administrative levels, reflecting the organizational structures and boundaries in central government. This main pattern is in line with previous studies (Christensen and Lægreid 2008, Lægreid et al. 2016). A lack of cross-boundary coordination seems to be a main concern among a majority of civil servants.

Table 1. Coordination capacity and coordination quality by policy area. Percentage assessing coordination as good or very good.

	Climate	Police	Immi-gration	Climate, police and immigration	Other policy areas	Total
Coordination capacity in own policy area	52	27	40	44	57	54
Coordination quality: - Within own policy area	67	48	41	56	62	61
- Across policy areas	42	28	24	35	39	39
- With local/regional bodies	37	27	21	31	33	33
- With international bodies	51	28	22	39	49	48
- With private actors/ civil society*	(37)	(19)	(0)	(30)	(41)	(40)

'Missing','do not know' (for coordination capacity) and 'not relevant' (for coordination quality) are excluded,[1] *: Only asked to civil servants in ministries

Table 1 also reveals, first, that overall coordination capacity and quality overall are perceived as poorer in the selected wicked areas taken together than in other policy areas. This is especially the case for coordination capacity. When it comes to types of coordination quality, we see a differentiated picture. The difference between the three selected policy areas and other policy areas is largest when it comes to the quality of coordination with international bodies and the private sector/civil society (for ministries).

Second, table 1 also shows that there are clear variations among the three selected policy areas that encompass the wicked issues category. Overall, coordination quality and capacity are perceived as much better in the areas of climate area than in the areas of immigration and police, an about on the same level as for all the other policy areas. Climate chane scoring relatively higher is especially the case when it comes to the quality of internal coordination, international coordination and overall coordination capacity. Assessments of coordination capacity are lower for the police than for immigration, but slightly higher on most coordination quality measures.

Third, there is the same variation across different coordinating dimensions when it comes to coordination quality in wicked areas as in the other policy areas. It is perceived as best regarding internal coordination within own policy area, which must reflect fewer structural boundaries to attend to, while cross-boundary coordination is more difficult, both horizontally towards other ministerial areas and vertically downwards to local and regional bodies as well as upwards to international bodies and outwards to the private sector and to civil society.

In general, there is a significant positive correlation between coordination capacity and coordination quality measures and also between the different dimensions of coordination quality. This means that if coordination capacity is perceived as high, perceived coordinating quality also receives a high score. And if respondents rate coordination quality as good along one dimension, it also tends to be seen as good along the other dimensions. So the coordination dimensions are seen more as supplementary and complementary than as alternative or competing. It does not seem to be a zero-sum game when it comes to different coordination dimensions.

Multivariate analysis

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[1] For coordination capacity this is 20% of the respondents, for coordination quality it varies from 39% (within own policy area) to 66% (local and regional bodies)

First, there is no overall significant effect of policy area on coordination quality. We also did a regression analysis of the climate, police and the immigration fields separately. For immigration and the police there is no significant effect on coordination capacity and quality when we control for other factors. For the climate field, there are, however, some significant effects (see Appendix). Controlled for other factors, civil servants working in the climate field report better coordination quality within own policy area, with local and regional bodies, and also with international and supranational bodies than those working in other policy fields.

Second, going back to the overall explanatory power of the independent variables, the most striking finding is the importance of cultural features (Table 2). When controlling for structural features; conflict, trust relations and identification show a systematic and strong correlation with perceived coordination capacity and quality along the different dimensions analyzed. A high level of mutual trust, a low level of conflict and a high level of identification with central government all seem to enhance positive perceptions of coordination capacity and quality. The strongest factor is the level of mutual trust between ministries and central agencies.

Table 2. Regression analyses. Linear regression. Standardized Beta coefficients

	Coordi-nation capacity	Coordination quality				
		Internal	*Hori-zontal*	*Regional local*	*Inter-national*	*Private sector*
Structural features:						
-Administrative level	.10***	.23***	.21**	.04	.19**	-
-Position	.01	-.03	-.01	.06*	-.03	.06
-Policy field	.02	-.04	-.02	-04	-.03	.05
-Network arrangements	-.01	.02	.03	.00	.08**	-.05
-Coordination tasks	.03	.01	.01	.01	.00	.03
-Transboundary collaboration	.05*	.08***	.09***	.06*	.02	.07*
Cultural features:						
-Conflict	.14***	.11***	.10***	.07**	.12***	.06*
-Mutual trust	.27***	.30***	.25***	.17***	.16***	.23***
-Identification central government	.10***	.06**	.09***	.12***	.04	.02
R2	*.15*	*.20*	*.17*	*.06*	*-10*	*.08*
Adjusted R2	*.14*	*.19*	*.16*	*.06*	*.10*	*.07*
F	*43.007*	*59.576*	*43-730*	*9.397*	*18.131*	*9.478*
Sign	*.000*	*.000*	*.000*	*.000*	*.000*	*.000*

*: Significant at .05 level, ****:** Significant at .001 level; *****:** Significant at .000 level

Third, regarding the structural features, administrative level has a significant effect on several of the capacity and quality measures. In particular, civil servants in the ministries perceive internal vertical coordination, horizontal coordination across policy areas and coordination with supranational and international bodies as better than those working in the central agencies. They

also perceive coordination capacity to be stronger. Hierarchical position seems to have no overall effect, which is somewhat surprising since this is generally a powerful independent variable in many analyses of these types of data (Christensen and L'greid 2008).

One interesting observation is that network arrangements do not seem to have any effect on coordination capacity and quality except for international coordination. A high level of participation in working groups and project groups has a positive effect on the quality of international coordination. But, there is no effect on coordination within own policy area, across policy areas, with local and regional government or with actors in the private sector.

Having coordination tasks also has an effect on transboundary collaboration, meaning that civil servants working in areas requiring collaboration across policy areas and/or administrative levels assess internal and horizontal coordination as better than civil servants who do not work in such fields. The same applies to a lesser degree to coordination capacity, coordination with local and regional bodies and coordination with actors in the private sector or civil society. This may indicate that the transboundary coordination measure reflects reality better than formally having coordination tasks.

Discussion

The main results for wicked policy areas are a mixture of similarity and divergence. The similarity part is that regardless of policy area, there are variations between different measures of coordination quality. The divergence part is related to two aspects. One is that the civil servants in the wicked policy areas are scoring overall lower on perceived coordination capacity and quality. The other is that there are clear variety among the three wicked policy areas concerning perceptions, with climate change area as deviant among the three areas and more similar to the others policy areas.

Why is it some basic contact pattern similarity between the wicked issue policy areas and the other areas? The obvious answer to that is that there are major structural reasons why it more contact inside public organizations that across organizations boundaries horizontally and vertically (Simon 1958). Organizational units and actors that are close to each other will see contacts and coordination differently compared to those that have to cross structural borders to communicate and coordinate (Egeberg 2012).

Why are the three wicked policy areas scoring overall lower on perceived coordination capacity and quality than the other policy areas? One answer to that could be that these policy areas are characterized by a more complex pattern of institutions and actors than the others, and that they therefore are struggling more to coordinate. It could also be part of the equation that

means-end thinking or rational calculation is more demanding in these policy areas (cf. Dahl and Lindblom 1953).

Why is the policy area climate change scoring relatively higher than police and immigration, and more similar to the other policy areas? One reason may be political saliency, which at best could be a partial explanation, since the two other areas both should be salient generally and also more specifically in Norway after the terrorist act of 2011 and the immigration crisis in 2015. Another explanation could be political priorities to give more resources to the policy area of climate change, also because Norway is an important gas and oil nation.

However, one may also discuss methodological factors involved, i.e. it is not been differentiated strongly enough between and inside policy areas according to the degree of wickedness. There are certainly variations between the police, climate change and immigration in this respect and there may be variation within specific areas too. For example, the Ministry of Climate and Environment and the Climate Agency have a rather broad range of tasks that include not only climate issues, but also environmental protection, pollution, contamination and nature management. Similarly, the other policy areas might include other wicked issues such as poverty, unemployment or public health. In practice, wicked features can be seen as part of a complex continuum of problem types (Alford and Head 2017). Therefore, our categorization of wicked policy areas might be too rough and include too much 'noise'.

Concerning the other structural variables, for administrative level we expected civil servants in the ministries to face less coordination problems and more coordination capacity especially regarding internal coordinating within own policy area than those working in central agencies. The findings support this expectation. Civil servants working in ministries report better coordination capacity and quality within own policy area, across policy areas and also with international bodies. This might reflect that ministries have more authority, resources and instruments for coping with coordination problems than the agencies (Christensen and Lægreid 2008). Administrative leaders in the ministries have diverse potential coordinative measures, like committees of under-secretaries of state, staff supportive functions for coordination, organized 'duplication' units, meaning units systematically working on control and coordination of issues and agencies, etc. (Egeberg 2012).

Even though the expectation of a positive relationship between transboundary coordination responsibilities and coordination capacity and quality does not get any general support, there are some effects within the climate change area. This is especially the case when

it comes to coordination across administrative levels both upwards and downwards, but not when it comes to horizontal inter-ministerial coordination. This may reflect both the fact that this policy area receives a lot of political attention, which provides more resources for coordination, but also the difficulty of integrating this area with the energy area (lack of cross-sectoral horizontal coordination), which is reflected in the fact that in Norway there is one ministry for oil/energy and one for environment/climate policy, with historically different profiles and not much interaction or coordination.

Except for coordination with international bodies, network arrangements do not enhance coordination capacity or quality in any significant way. This indicates that such network arrangements do not significantly improve coordination quality. One interpretation of this might be that such arrangements are more about information-sharing than about coordination. There might be more negative than positive coordination if the participants' main task is to defend their own parent institution (Scharpf 1994, Radke, Hustedt and Klinnert 2016). Since this is a rather wide and heterogeneous additive index, it might also be methodologically too diverse to have an effect.

Formally having coordination tasks produced no effect on coordination capacity and quality, which might reflect coordination challenges in a sectorized and fragmented central civil service. Transboundary collaboration taps another and more practical aspect of coordination, i.e. whether actors work in areas that demand collaboration across levels and sectors. Our expectation was that civil servants working on transboundary issues would face more coordination problems than other civil servants. The findings are the opposite. These civil servants in fact report stronger coordination capacity and better coordination quality across policy areas, but also internally within own policy area and with local and regional government. So we might have some of the same effects here that we found for administrative level, i.e. a lot of exposure to coordination challenges does not primarily lead to coordination problems but to positive coordination capacity and quality. In other words, there might be a 'learning by doing effect' concerning coordination (March 1994).

Going back to our theoretical perspectives and expectations, we find that most of the expectations from the cultural-institutional perspective are supported. It is clear that the cultural-institutional perspective has the strongest explanatory power, relative to the structural perspective. These findings confirm other studies on coordination quality (Christensen and Lægreid 2008, Christensen et al. 2016, Lægreid et al. 2016). Civil servants who report a high level of mutual trust between ministries and central agencies, who work on non-salient issues with a low level of conflict and who strongly identify with the central government apparatus as

a whole are more satisfied with both coordination capacity and coordination quality within own policy area, across policy areas, upwards to international bodies and downward to regional and local government. The effect of mutual trust relations is especially strong. Thus, cultural features seem to have a positive effect on perceived coordination capacity and quality.

So, what general conclusions can we draw from these observations? One is the insight derived from Krasner (1988) on institutionalization. He differentiates between vertical depth and horizontal width in understanding what produces overall cultural integration or cohesion in public organizations (Selznick 1957). Vertical depth denotes the extent to which actors are influenced by the main informal cultural norms and values in their actions, while horizontal width denotes the extent to which actors see the cultural norms and values of other units as important for their own. The three variables in question have elements from these two dimensions. Identification per se indicates strong cultural commitment, and the broader it is, the more an actor cares about other units and sees his/her work in a collective or holistic perspective. Mutual trust definitely relates to horizontal width and integration. If there are formal structural barriers to coordination, mutual trust can facilitate coordination in practice. The same goes for lack of conflict. The lower the level of conflict, the easier it is to overcome structural boundaries and vested interests and to interact and coordinate.

Conclusion

Summing up, regarding the significance of policy area, a complex picture has been presented. The hypothesis on negative coordination perceptions in wicked policy areas (Policy Area 1) seems to have a relatively weak overall explanatory power, even though the scores for this group of three wicked policy areas – climate change, immigration and police - are somewhat lower, especially concerning coordination capacity and for the police more specifically. If the differences in scores for the three wicked areas are focused, we see that climate change policy area seems to indicate a result in accordance with the hypothesis Policy Area 2, expecting positive coordination perceptions. Overall, however, our main results are mostly supporting the notion that the negative effects of ministerial responsibility and strong sectors on coordination, on the one hand, and positive experiences in the practice of belonging to wicked issue areas, on the other, counteract each other (Policy Area 3). Somewhat surprisingly, we only find limited support for the expected negative effect of wicked policy areas on coordination quality. Thus a main finding in the paper is that whether a policy area is labeled a wicked problem has overall a limited effect on perceived coordination among civil servants.

Going back to the broader picture, this article has revealed, first, that there are coordination challenges within the Norwegian central government apparatus. Only about half of the civil servants report that coordination capacity is good or very good, while the quality of transboundary coordination is rated as rather poor. Given the historical trend of strong siloization and sectorization in the Norwegian governmental apparatus owing to the main governance principle of ministerial responsibility (Christensen 2003), coordination quality within own policy area is perceived as rather good. In contrast, horizontal coordination between policy areas and vertical coordination across administrative levels are assessed as rather poor. This also reflects the tension between top-down steering and local self-government. The overall insight here is that structural borders are important in channeling the thought and actions of civil servants and therefore also coordination activities (Gulick 1937, Simon 1957)

Second, there are positive correlations between the different dimensions of coordination. If respondents perceive coordination as good along one dimension, they also tend to perceive it as good along other dimensions. Thus, the different coordination dimensions are more supplementary than competing. This may have to do with coordination experience, exposure and learning (March 1994).

Third, the variations in perceived coordination are due more to cultural features than to structural features. What matters most for coordination capacity and quality is strong mutual trust relations, a low level of perceived conflict and strong identification with central government in general. This indicates the importance of cultural integration in structurally fragmented systems, i.e. cultural factors counteract the effects of structural barriers for communication and interaction across organizational borders (Krasner 1988, Selznick 1957).

 Fourth, there are effects related to two structural variables: administrative level and transboundary tasks. Civil servants working in ministries report better coordination than other civil servants do, which is supporting our expectations. This leads us to conclude that the challenges of coordination may foster competence and positive experiences rather than problems. Working on issues that require transboundary collaboration does not seem to have a negative effect on coordination capacity or quality; the opposite is true for internal and horizontal coordination, while formally having coordination tasks has no effect. This might indicate the same mechanism as for administrative level, namely, that exposure to the challenges of coordination may foster positive effects on coordination capacity and quality.

The policy implications of this analysis are first that there is a need to problematize wickedness. One way of doing it is to reconceptualize wickedness to include different degrees of structuredness (Turnbull and Hoppe 2018). Second, the 'wicked policy' fields are

characterized by differences and not only by similarities and that we need to take the specific features of different 'wicked policy' fields into consideration when addressing them. Second, even if better coordination is widely seen as necessary to respond effectively to wicked problems, the political and managerial challenges of effective coordination of such problems can be significant (Peters 2015). Third, rather than applying overly optimistic or pessimistic strategies for handling 'wicked' problems, having a pragmatic approach (McConnell 2018), aiming at piecemeal and incremental reforms allowing for adaptation and experimental learning might be fruitful way forward. Rather than having unrealistic high expectations regarding how to deal with 'wicked issues' a small wins framework (Termeer and Dewulf 2018) might be a more promising response.

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Appendix

Table A1. Regression analyses. Linear regression. Standardized Beta coefficients

	Internal	*Regional local*	*Inter-national*
Structural features:			
-Administrative level	.23***	.03	.19***
-Position	-.03	.06*	.03
-Policy field: Climate	.05**	.06*	.06*
-Network arrangements	-.02	.00	-.10***
-Coordination tasks	.00	.01	.00
-Transboundary collaboration	.08**	.07*	.02
Cultural features:			
-Conflict	.11***	.07*	.12**
-Mutual trust	.30***	.16**	.16***
-Identification central government	.06**	.12**	.04
R2	*.20*	*.07*	*.11*
Adjusted R2	*.20*	*.06*	*.10*
F	*59.966*	*9.699*	*20.197*
Sign	*.000*	*.000*	*.000*

*: Significant at .05 level, **: Significant at .001 level; ***: Significant at .000 level