

COMPARING COORDINATION STRUCTURES FOR CRISIS MANAGEMENT IN SIX COUNTRIES

TOM CHRISTENSEN, OLE ANDREAS DANIELSEN, PER LÆGREID
AND LISE H. RYKKJA

The article analyses organizational structures and coordination mechanisms for crisis management in six European countries, focusing on the prevalence of hierarchical and network arrangements, administrative culture and perceptions of coordination quality. Our main research question concerns the importance of collaboration and cooperation in the management of crises. We apply a structural-instrumental and a cultural perspective, and examine data on formal organizational structures as well as survey data from administrative executives. The mapping reveals hybrid coordination arrangements with different national 'flavours'. The survey data show that the executives accorded significant weight to coordination, but the use of different coordination mechanisms was only loosely linked to their assessments of coordination quality. Our findings support a view of public administration as a largely composite system combining contradictory organizational principles that have evolved through institutional layering. National context and the specific challenges from different types of crises therefore influence crisis management capacity profoundly.

INTRODUCTION

Crises are increasingly transboundary, crossing geographical, administrative, infra-structural and cultural borders (Boin *et al.* 2005; Head 2008; Ansell *et al.* 2010; Fimreite *et al.* 2014). Policy-makers, regulators and administrators struggle to establish adequate administrative structures to facilitate coordinated responses, trying to combine organizational stability and preparedness with flexibility and rapid response. A main question is: How best to organize for effective crisis management? Core issues are crisis response, critical decision-making, communication and coordination, but also the recovery, prevention and preparation phases of crisis management (Boin *et al.* 2005).

Public administration scholars have devoted much attention to organization, complexity, collaboration and coordination. Their insights are, however, less frequently applied to the domain of crisis management. This article aims to fill some of the gap, by investigating organizational structures and coordination mechanisms in central government. Crisis research has tended to concentrate on technical/managerial or strategic/political security perspectives ('t Hart and Sundelius 2013; Boin *et al.* 2014). Organizational studies focusing on crisis management in the public sector are less common. Our main aim is to contribute to the debate on crisis management by using theories from public administration. The argument is that organizational and institutional features matter and need to be taken into account in order to understand how crises are dealt with.

Cooperation and coordination are core concerns in the crisis management literature (Boin and Bynander 2015; Rhinard *et al.* 2013). Coordination is identified as a critical failure in many, perhaps most, crises, and is at the same time seen as the solution to such failure. Coordination is, however, an elusive concept that can mean different things. It can imply the ability to impose actions on others hierarchically, or indicate a more non-hierarchical facilitating role (Lodge and Wegrich 2014) often associated with network arrangements.

Tom Christensen is in the Department of Political Science at the University of Oslo, Norway. Ole Andreas Danielsen, Per Lægred and Lise H. Rykkja are in the Department of Administration and Organization Theory at the University of Bergen, Norway. Lise H. Rykkja also works as a researcher at the Uni Research Rokkan Centre in Bergen, Norway.

This article contributes to the literature on coordination in crisis management by focusing on the prevalence of such hierarchical and network arrangements, as well as on administrative culture and perceptions of coordination quality.

The main research question is how important collaboration and cooperation are within the policy area of crisis management. We examine what kind of formal coordination mechanisms are used by those engaged in crisis management in different political and administrative contexts, how these mechanisms are evaluated by those who use them and how the practice of different mechanisms correlates with coordination quality. Our theoretical approach draws on organizational and institutional theory. We distinguish between a structural-instrumental and a cultural perspective on organization and coordination (Christensen *et al.* 2007). The theoretical framework and research design are elaborated in further detail in the following sections.

The empirical analysis proceeds in two steps. First, we examine the main organizational structures for dealing with crises in six European countries and analyse how they vary. Second, we use survey data to investigate what main coordination mechanisms are used, how administrative executives evaluate coordination within their field and how use and perceptions of coordination quality are correlated. We focus on the organization of crisis management in six European countries: Denmark, Germany, the Netherlands, Norway, Sweden and the United Kingdom.

COORDINATION: HIERARCHY OR NETWORK?

In most government systems, both specialization and coordination are necessary. According to Gulick (1937), organizational specialization triggers coordination challenges. Coordination is a perennial concern in public administration (Bouckaert *et al.* 2010; Lægreid *et al.* 2014). It can be defined as adjustment of activities and decisions among interdependent actors to achieve specified goals (Koop and Lodge 2014). Our focus is on coordination as a process. Coordination can be achieved in different ways, by hierarchical means or network structures. In crisis management, coordination between different actors and organizations is a constant necessity (Kettl 2003; Brattberg 2012; Boin and Bynander 2015). It is especially relevant in complex crises that are increasingly transboundary, because such crises cannot be solved by organizations working alone (Ansell *et al.* 2010).

As public administration has become an increasingly multi-actor and multi-level entity, cross-boundary working and coordination across levels of government and policy sectors have increasingly been seen as a more adequate response to a fragmented political-administrative system by both public administrators and scholars (O'Flynn *et al.* 2014). This development has been framed as typical in post-New Public Management reform measures (Christensen and Lægreid 2007). Here, partnerships and cooperation via networks are emphasized by reform agents, often relying on inherently soft measures devised to 'nudge' different organizations towards moving in the same direction.

When crises occur, different arrangements are employed to respond to them. Specialization is often necessary to ensure the availability of certain types of expertise, training and knowledge. Cross-cutting network arrangements are often introduced to resolve coordination problems. However, crises also trigger a demand for clear leadership and central direction, clear-cut responsibilities and chains of command through hierarchical structures (Rykkja and Lægreid 2014).

A STRUCTURAL-INSTRUMENTAL PERSPECTIVE

We distinguish between two theoretical perspectives on coordination processes. The structural-instrumental point of view emphasizes how the formal-normative structure of public administration influences decision-making processes by channelling attention and shaping frames of reference and attitudes among decision-makers constrained by bounded rationality (March and Simon 1993; Scott 2003; Egeberg 2012). Coordination by formal organization has both a vertical and a horizontal version (Gulick 1937). The vertical version alludes to the principle that the higher the leadership level, the more coordination authority it has. The horizontal one focuses more on actors at the same level working together in different ways.

These dimensions correspond to the distinction between hierarchy and networks frequently made in research on public sector coordination. Bouckaert *et al.* (2010), for example, add networks and markets to hierarchy as relevant coordination mechanisms within the public sector. This accords with a view that public administration has a repertoire of coexisting, overlapping, supplementing and competing organizational forms (Olsen 2008).

Hierarchy is the traditional coordination mechanism in public administration and goes back to Weber's theory of bureaucracy (Weber 1947). From a structural-instrumental perspective, decision-making processes in public organizations are largely seen as the result of hierarchical coordination by top political and administrative leaders. The central government apparatus is typically horizontally specialized according to purpose or tasks. Coordination mainly relates to vertical specialization and how authority and patterns of accountability and control emanate from one's position in the formal hierarchy. The principle of ministerial responsibility or ministerial rule, a main governance doctrine in the countries examined, builds on this hierarchical approach. Generally, ministerial rule results in strong line ministries and vertical coordination, but correspondingly weak horizontal coordination, overarching ministries and agencies. Strong vertical coordination is associated with management pathologies such as departmentalism, tunnel vision and vertical silos (Hood 1976).

Networks can be seen as an alternative or a supplementary coordination mechanism. Network arrangements may be necessary to help mediate departmental conflicts or interests cross-cutting policy areas and are devised to forge coordination when a hierarchical mode of coordination is less viable. A reform discourse emphasizing partnerships and collaboration across departmental boundaries presupposes changing cultural attitudes (Christensen and Læg Reid 2007). Research on networks frequently focuses on the interaction and interdependencies between government and non-government actors (Klijn and Koppenjan 2012), but also on efforts to bring civil servants from different policy areas together to trump hierarchy and 'silo' management (Hood and Lodge 2006, p. 92). Such arrangements may be especially important in tackling 'wicked problems' that transcend traditional sectors and policy areas (Rittel and Webber 1973; Head 2008). Complex societal problems cannot be compartmentalized along sectoral lines and thus increase the need for contingent coordination, collaborative governance and network approaches (Kettl 2003; Ansell 2011). Cross-sectoral coordinating capacity is therefore important. Network-based structures may facilitate, but can also complicate, coordination. Careful design and commitment to their functioning are among the factors that can influence their success (Læg Reid *et al.* 2014).

A structural–instrumental perspective assumes that the use of specific organizational solutions, or coordination mechanisms, has the potential to improve the quality of coordination. From a structural perspective we therefore expect the use of crisis management coordination mechanisms – whether they are predominantly vertical and hierarchical, or horizontal and network-oriented – to be linked to administrative executives’ perceptions of coordination quality. More specifically, we expect that administrative executives within the policy area of justice, public order and safety, who tend to use hierarchy when facing conflict or overlap with other organizations, will perceive vertical coordination quality as high. We also expect administrative executives who tend to use network arrangements when facing conflict or overlap to perceive horizontal coordination quality as high.

A CULTURAL PERSPECTIVE

A cultural perspective is open to the idea that organizations have a specific culture: informal values and norms that exert influence on decision-making and are rooted in the historical and institutional traditions of political–administrative systems (Selznick 1957). The failure of government agencies to collaborate in situations in which coordination would be valuable to the public is well known in crisis management. A culture of joint problem-solving and an administrative culture emphasizing coordination might enhance coordination within the public sector (Bardach 1998).

The cultural perspective emphasizes that a public sector ethos, public values and trust relations are important features that can explain how actors and decision-makers within the bureaucracy act and think (Christensen *et al.* 2007). Political–administrative systems are seen to be embedded in historically evolved, distinct and informal features that provide direction for, and give meaning to, organized activities. Organizations are ‘infused with value’ beyond the technical requirements of the task at hand, meaning that values and ways of acting and believing influence the decisions and actions that are made within the organization (Selznick 1957; Egeberg 2012). Informal norms, identities and a ‘logic of appropriateness’ are important explanatory factors for what happens within an organization (March and Olsen 1989). They may both enable and constrain action, as is emphasized by the notion of ‘path-dependency’ (Krasner 1988). The assumption is that different administrative traditions or cultures represent filters producing different coordinating patterns in different contexts (Olsen 1992). Therefore it is relevant to examine what values the government executives emphasize and how these values are linked to the choice of specific coordination mechanisms.

From a cultural perspective, we expect administrative executives who identify strongly with a ‘coordination culture’ to value horizontal coordination more than those who do not. Operationalized, we expect that administrative executives within the policy area of justice, public order and safety, who emphasize the importance of getting different organizations to work together and finding joint solutions to common problems, will perceive horizontal coordination as high.

The prospects for forging coordination can also be expected to depend on the degree of cultural compatibility with established identities and political–institutional legacies (March and Olsen 1989). A cultural perspective emphasizes that different national political–institutional legacies are important in explaining variations in coordination behaviour (Painter and Peters 2010; Charron *et al.* 2012). For instance, the *Rechtstaat* orientation of the German administrative system implies a strong Weberian administrative culture that may render vertical coordination easier, but may also produce significant

horizontal coordination problems. The strong consensus orientation and collaborative decision-making style of the Nordic countries can further both horizontal coordination and coordination with local and regional government, as well as with stakeholders outside government. The formal organization of political-administrative systems can hence be expected to interact with cultural factors. Thus, we will expect that administrative executives in countries with Westminster political systems and more homogeneous administrative apparatuses will evaluate both vertical and horizontal coordination positively, while executives in countries with minority coalition governments and more fragmented administrative structures will perceive coordination as poorer than those in other countries.

A COMPLEMENTARY PERSPECTIVE

Thus far we have outlined two contrasting modes of coordination and linked them to contrasting perspectives on public sector organizations. The distinction is merely analytical, however. Both perspectives, a structural and a cultural one, can explain the existence of hierarchy and network mechanisms and offer relevant insights about the specific mix of arrangements used in each country studied.

The distinction between hierarchical and network modes of coordination is also quite subtle. Network structures may hold particular promises for typically 'wicked' policy problems, but do not necessarily suggest that hierarchies are no longer operative or relevant (Provan and Kenis 2008). Network arrangements often imply part-time participation and represent secondary affiliations for those who participate, complementing primary affiliations linked to the officials' main positions in the hierarchy (Egeberg 2012). Networks may therefore be operative in the 'shadow of hierarchy' (Heretier and Lehmkuhl 2008), and we may observe various hybrid coordination arrangements (Boin *et al.* 2014). This implies that a mixture of factors must be taken into account when explaining coordination behaviour (Moynihan 2009). Crises may thus require a network of responders that needs to be managed by hierarchy (Moynihan 2008).

One example of a hybrid structure that combines hierarchy and network is the 'lead agency' that manages a separate network. A lead agency typically chairs an interagency working group – a network of organizations – established to coordinate policy related to a specific operation. The lead agency normally determines the agenda, ensures cohesion among the agencies involved, is responsible for implementing decisions and has supervisory functions. Thus, it operates within a network but is also associated with a traditional hierarchical approach to coordination as its function often is to impose control on others within the network (Boin *et al.* 2014). The specific arrangements vary from country to country. This mixed arrangement supports an understanding of public administration as constituting a diverse repertoire of coexisting, overlapping and potentially competing organizational principles and cultural norms and values (Olsen 2010).

In the case of 'wicked problems' such as crises that are characterized by complexity, uncertainty and ambiguity (Head 2008), the organizational structure often does not fit the problem structure. Specialization based solely on purpose or tasks is not the best solution to transboundary crises, for instance. Instead, a hybrid system of hierarchy and network arrangements might be necessary. There is, however, no convergence towards a best practice (Nohrstedt and Hansén 2010; Bossong and Hegemann 2013) or a universal or uniform administrative model for crisis management (Krieger 2013). Thus, in times of crisis, existing executive management practices have to be challenged (Lodge and Wegrich

2012). An important analytical task of this article is to establish the relative importance of some of the factors in the mix and explore how they are put into practice across different political–institutional settings.

RESEARCH DESIGN AND DATABASE

By ‘crisis’ we mean situations where there is a serious threat to the basic structures or fundamental values and norms of a system and where critical decisions have to be made quickly under highly uncertain circumstances (Rosenthal *et al.* 1989). This definition covers natural disasters, terrorist attacks, pandemics, industrial and transportation accidents and infrastructure failures. Our focus is on crisis management in civil society, leaving military and related security issues aside.

The six selected countries share some key characteristics. They are all high-trust, mature Western European parliamentary democracies with a bureaucratic state infrastructure, and have implemented important reforms within the area of crisis management during the past 15 years (Danielsen 2013). They differ in governance doctrines and administrative traditions and culture (Painter and Peters 2010). The UK belongs to an Anglo-American meritocratic tradition with no written constitution. Norway, Sweden and Denmark belong to a Scandinavian collaborative tradition with large professional welfare states. Germany and the Netherlands represent a Germanic *Rechtstaat* tradition, and Germany is the only federal system being studied. In contrast to the other countries, the principle of ministerial responsibility does not apply to Sweden, which operates under a collective, cabinet-based responsibility principle. Five of the countries are members of the European Union, while Norway is integrated into Europe through the European Economic Area (EEA) agreement. The countries have different experiences of major crises and terrorism. They also display important variations in organizational arrangements for dealing with crises, and the specific orientation, scope and depth of the reforms within the policy area vary considerably.

The mapping section mainly draws on official documents and information from relevant central government institution websites. It maps the administrative arrangements for crisis management at the central government level in the six countries by focusing on key institutions, key intermediate network arrangements and overall coordination features. Our focus on the central administrative level allows us to observe a small but nevertheless important part of the wide range of public sector organizations.¹ The fairly modest number of observations implies that conclusions must be drawn with caution.

The quantitative section analyses data from a survey conducted in 2012–13 among European top-level administrative executives in central ministries and agencies.² We analyse the responses from those who worked in the area of ‘Justice, public order and safety’ within the six countries. The survey was answered by a total of 248 officials from this policy area: 80 from Germany, 39 from the United Kingdom, 49 from the Netherlands, 48 from Sweden, 13 from Denmark and 19 from Norway.³

COORDINATION STRUCTURES FOR DEALING WITH CRISES IN SIX COUNTRIES

Over the past 10–15 years there has been a significant reorganization and reshuffling of formal governmental arrangements for dealing with crises in all the selected countries. Generally, crisis management structures mirror the regular political–administrative structures in the selected countries (table 1). The overview reveals a tension between the need for local flexibility during a crisis and the need for central control, authority and planning

TABLE 1 *Key institutions and coordination structures in six countries*

	<i>Key institutions</i>	<i>Key intermediate coordination structures</i>	<i>Overall coordination features</i>
Germany	Federal Office of Civil Protection and Disaster Assistance, Ministry of the Interior	Inter-ministerial Panel on National Crisis Management, federal-regional coordination	Decentralized, federal system with interlocking coordination problems, ministerial responsibility
United Kingdom	Cabinet and the Civil Contingencies Secretariat	Cabinet Office Briefing Rooms	Rather centralized at strategic level, ministerial responsibility
The Netherlands	National Coordinator for Security and Counterterrorism, Ministry of Security and Justice	Ministerial Committee for Crisis Management,, National Crisis Centre, National Operational Coordination Center	Rather centralized at strategic level, ministerial responsibility combined with network arrangements
Denmark	Danish Emergency Management Agency, Ministry of Defence	Danish National Emergency Organization, NOST/IOS	Ministerial responsibility with network arrangements, rather centralized,
Sweden	Prime Minister’s Office, Swedish Civil Contingencies Agency	Crisis Management Chancellery	Rather centralized, no ministerial responsibility, strong central agencies
Norway	Ministry of Justice and Public Security, Directorate for Civil Protection and Emergency Planning, National Security Authority	The Government Emergency Management Council	Rather centralized and fragmented with some network arrangements, ministerial responsibility, strong line ministries

(Kettl 2003). There is also a tension between existing lines of specialization by sector, and efforts to establish cross-boundary arrangements (Fimreite *et al.* 2014).

In Germany, crisis management is decentralized and mainly handled by the *Länder*, where the responsibility for crisis preparedness is spread across ministerial domains. Usually, the Ministry of the Interior is responsible for policy formulation. At the federal level, the Federal Chancellery may assume responsibility for overarching political coordination in crisis situations (Hegemann and Bossong 2013, p. 15). The Federal Ministry of the Interior leads the coordination of other federal ministries and central agencies in crisis situations via the Interdepartmental Committee for National Crisis Management. The Interministerial Coordination Committee of the Federal Level and the States provides general coordination between federal and state-level ministries, while the Permanent Conference of the Interior Ministers coordinates their activities under a rotating presidency. Within this structure, there is a special working group for civil protection and disaster relief. Under the Federal Ministry of the Interior, a designated central agency formed in 2004 – the Federal Office of Civil Protection and Disaster Assistance (BBK) – performs key tasks with respect to coordination between the federal government and the *Länder* (Hegemann and Bossong 2013). The German Federal Agency for Technical Relief (THW) also has important tasks in a crisis. The German system of civil protection is based on a rather fragmented legislative framework and reflects Germany’s

federalist model, which places limitations on the operational capabilities of federal actors.

In the United Kingdom the bulk of operational crisis management is also decentralized (Fanoulis *et al.* 2014). Strategic management is, however, rather centralized. Crisis organization at the central governmental level is based on the idea of lead government departments. Overarching coordination is managed through the Cabinet Office through its Civil Contingencies Secretariat, established in 2001. The lead organization function circulates between line ministries depending on where a crisis emerges (Westerberg and Nilsson 2011). A main task of the lead organization is to strengthen national preparedness by coordinating with bodies both within and outside the government. In major crises, the lead organization reports to a Security and Intelligence Coordinator and acts as a secretariat for the Home Secretary vis-à-vis the Civil Contingencies Secretariat. An interministerial Cabinet Office Briefing Room (COBR) has been designated as the key political facility in incidents of 'national significance', and represents a network arrangement under central direction (Fanoulis *et al.* 2014, p. 13).

In the Netherlands, a similar picture emerges. The bulk of operational crisis management is handled at the regional and local levels, while central government institutions perform important coordination functions. Recent reforms have aimed to strengthen national crisis organization. At the central level, line ministries house designated departmental crisis centres that are coordinated during crisis situations via the Ministerial Committee for Crisis Management and the administrative Interdepartmental Crisis Management Committee. A National Crisis Centre facilitates coordination between ministerial areas in cross-cutting crises (Kuipers and Boin 2013, p. 10). The National Operational Coordination Centre manages the coordination between central government institutions and the local level (Kuipers and Boin 2013, p. 14). The National Coordinator for Security and Counterterrorism (NCTV) was established in 2011. NCTV is part of the Ministry of Security and Justice and consolidates administrative capacity for crisis preparedness. It can be seen as a step towards a lead agency approach to crisis management. The ministry has been strengthened as part of this consolidation and enjoys delegated powers to intervene and act in other ministries' domains if and when a serious terrorist threat occurs.

In Sweden too, operational crisis management is significantly decentralized to actors at local and regional levels (Bakken and Rhinard 2013, p. 11). The idea of a lead agency was an important topic in structural reforms during the 2000s. It led to a reorganized designated crisis preparedness agency in 2009: the Swedish Civil Contingencies Agency. The agency was placed under the Ministry of Defence until 2014 when it was transferred to the Ministry of Justice. Despite its concrete mandate, its competence is limited. National crisis organization is predominantly network based (Westerberg and Nilsson 2011; Bakken and Rhinard 2013). The overarching political responsibility rests with the government, but the Prime Minister and his staff play key roles. A group for strategic coordination is directed by the State Secretariat of Justice. It draws up the overall strategy for the Government Chancellery in crisis situations and mediates between ministries in cases of disagreement. A Crisis Management Chancellery has been moved from the Prime Minister's Office to the Ministry of Justice. Its chief objective is to coordinate the crisis response within the national crisis organization. It also functions as an internal contact point during emergency situations.

In Denmark, a similar agency was created in 1993 as part of a new Preparedness Act. The Danish Emergency Management Agency (BRS) is subordinate to the Ministry of Defence, which has the overarching political-administrative responsibility for crisis preparedness

at the central level. The ministry hosts the Office of Emergency Management, which oversees the activities of the BRS and sets overall targets for the national preparedness policy. Even though the Danish system features elements of a lead agency model, there are important network-administrative arrangements between ministerial areas, including the National Operational Staff (NOST) and the International Operational Staff (IOS). The NOST is chaired by the Danish National Police and coordinates nationwide incidents, including a designated Central Operational Communications Staff. In particularly severe crises the government can activate the Danish National Emergency Organization. It has three layers: at the highest level is the government's sub-committee for security, consisting of the Prime Minister and the ministers of economic affairs, foreign affairs, defence and justice; then a civil servants' preparedness group, consisting of department executives plus executives from the central intelligence services; and finally a crisis preparedness group of representatives from the above-mentioned ministries plus the Ministry of Health, the Danish National Defence Command, the Danish National Police and the BRS. This group handles questions primarily related to overall preparedness planning.

In Norway the structure set up to deal with crisis preparedness and management is frequently described as fragmented (Lango *et al.* 2011; Fimreite *et al.* 2014; Rykkja and Lægveid 2014). The lead coordinating entity is the Ministry of Justice and Public Security. A Government Crisis Council (GCC) and an Emergency Support Unit (ESU) have administrative coordinating and support functions during a crisis. Residing under this ministry is the Directorate for Civil Protection and Emergency Planning, established in 2003. Its responsibilities include civil protection; national, regional and local preparedness; and emergency planning. The National Security Authority is subordinate to the Ministry of Defence, but reports to the Ministry of Justice on civil matters. Thus, in Norway too, the policy area activates several political-administrative actors and network arrangements that have been established to foster better coordination. Following the terrorist attacks in Oslo and at Utøya in 2011, the capacity and preparedness of the Ministry of Justice were heavily criticized. In 2012, the government established that the ministry should take the lead in all national crises. The ESU was strengthened and made a permanent unit under the ministry. Moreover, a Civil Situation Centre was established within the ministry to facilitate the functioning of the lead ministry. The ESU now resides under a new Department for Crisis Management and Security within the ministry.

Coordination in the six countries is achieved neither through hierarchical nor through network-administrative features alone; rather, hybrid institutional administrative arrangements have been established. Different principles tend to be applied in tandem, indicating a merger between hierarchy and networks (Moynihan 2008; O'Leary and Bingham 2009).

COORDINATION MECHANISMS, CULTURE AND QUALITY

By and large, our data reveal that administrative executives accorded significant weight to collaboration and cooperation within their policy area. When asked 'How important is collaboration and cooperation as a reform trend in your policy area?', a large majority (77 per cent) considered it to be very important, with Norway and the Netherlands scoring the highest and Denmark the lowest (table 2). This reflects the great importance of coordination and collaboration in crisis management, both as a problem and as a solution (Boin and Bynander 2015). An additional point is that 31 per cent of the top civil servants stated that reforms were mainly crisis or incident-driven. The score was particularly high

TABLE 2 'How important is collaboration and cooperation as a reform trend in your policy area?' N (average): 226*

	<i>Important</i>	<i>Indifferent</i>	<i>Not important</i>
Germany	76	13	12
UK	72	17	11
The Netherlands	89	12	4
Sweden	75	14	12
Denmark	44	22	33
Norway	88	6	6
Overall	77	12	11

*Based on a 7-point scale: 1–3: important; 4: indifferent; 5–7: not important.

TABLE 3 'When my organization's responsibility or interests conflict or overlap with that of other organizations, my organization typically ...' N (average): 200*

	<i>Disagree</i>	<i>Indifferent</i>	<i>Agree</i>
Refers the issues upwards in the administrative hierarchy	27	17	55
Refers the issue to political actors and bodies	44	18	38
Sets up special purpose bodies (more permanent)	69	13	18
Sets up cross-cutting work or project groups	32	23	45
Sets up cross-cutting policy arrangements	45	20	35
Sets up a lead organization	50	18	32
Consults stakeholders in private sector/civil society	63	14	23
Consults experts	53	20	28

*Based on a 7-point scale: 1–3: disagree; 4: indifferent; 5–7: agree.

in the Netherlands but not as high in Germany and Sweden. Only 23 per cent said that the reforms were largely planned.⁴

How do executives react when they experience overlaps and potential conflicts of interest with other organizations? Table 3 shows that they generally tend to refer issues upwards within the administrative hierarchy. A second important mechanism is the establishment of cross-cutting working groups, together with the initiation of cross-cutting policy arrangements or programmes. Roughly one-third of the respondents reported that their organization typically would set up a lead organization. Conversely, setting up more permanent special-purpose bodies or consulting with private sector or civil society organizations working in the field of crisis management was not particularly common. This finding reflects the overall strong specialization by task or purpose and departmental silos in the different countries. It also reveals that hierarchy is often supplemented by network arrangements as well as by a lead agency model.

There were significant variations between countries with respect to how the coordination mechanisms were applied. Referring issues upwards within the bureaucracy was least common in Norway and Sweden. Referring cases to the political hierarchy was most common in the Netherlands and least frequent in the UK and Denmark. Cross-cutting working groups appeared to be more popular in the Netherlands and Norway and were used far less in the UK. Conversely, cross-cutting policy arrangements were not particularly prevalent in Germany and Norway, but were often used in Sweden. Germany, along with the UK, also applied a lead organization model quite frequently, but this was less common in

Norway and the Netherlands. Consulting stakeholders in the private and voluntary sectors was less used in Denmark and the UK, but a fairly well-used tool in the Netherlands. This echoes the insight from our mapping exercise. It also shows that a systematic pattern is difficult to find across countries.

Our analytical framework also directs our attention to informal attributes that might sustain, support and potentially contradict established formal coordination arrangements, such as shared norms, values and the forging of a common coordination culture. Following Bardach's (1998) conception of a culture of joint problem-solving, we see the executives' attitudes towards getting public organizations to work together and finding joint solutions to solve problems of common concern as relevant proxies of an administrative coordination culture. Role identification is multi-dimensional, however, and the two indices reported on are part of a larger repertoire of administrative values. In the survey, achieving results, being able to implement laws and rules impartially and providing expertise and professional knowledge, as well as the efficient use of resources, were all rated higher than working together and finding joint solutions.

Overall, the officials who were surveyed displayed a strong orientation towards a common administrative coordination culture: 80 per cent agreed that finding joint solutions to solve problems of public concern was an important part of their role, while 79 per cent reported that getting public organizations to work together was an important component of this role.

Getting public organizations to work together was particularly highly valued in Norway and Sweden, but was not so strongly valued in the UK. The importance of finding joint solutions to solve problems of common concern did not vary much between the different countries.

PERCEIVED COORDINATION QUALITY

We now turn to the question of how perceptions of coordination quality relate to the use of different coordination mechanisms. Table 4 reveals how administrative executives perceived the state of affairs within their policy area.

The table shows that the respondents did not consider coordination to be particularly good, except vertically in their own policy area. Horizontal coordination across policy areas and with international and supranational bodies was seen as quite poor. Coordination with local and regional bodies and with stakeholders fell somewhere in between. One-third of respondents saw improvement over the last five years, another third reported deterioration and 38 per cent did not report any changes either way. This reveals an interesting paradox: on the one hand, coordination and collaboration was seen as an important reform trend; on the other, the officials reported few significant improvements.

TABLE 4 *Perception of coordination quality**. *N* (average): 202

	<i>Good</i>	<i>Neither</i>	<i>Poor</i>
Vertical coordination/within own policy area	59	22	19
Horizontal coordination/across policy areas	37	27	36
With regional/local governments	40	31	30
With international/supranational bodies	37	24	38
With private sector/civil society actors	43	32	25

*'Poor'/'Deteriorated': values 1–3; 'Neither': value 4; 'Good'/'Improved': values 5–7.

TABLE 5 *Assessment of coordination quality by country*. N (average): 244*

	GER	UK	NED	SWE	DEN	NOR
Vertical coordination/ within own policy area	45	52	67	76	40	59
Horizontal coordination/ between policy areas	39	33	38	41	20	33
With local and regional bodies	53	33	24	50	39	20
With supranational / international bodies	40	36	30	44	37	41
With private/ civil society stakeholders	42	48	52	34	50	33

*The figures are percentages that report good coordination or improved policy coherence and coordination (values 5–7 on a scale 1–7 where 1 was ‘very poor’ and 7 was ‘very good’).

There were also similarities and differences between countries regarding the perception of coordination quality (table 5). In all countries vertical coordination within their own policy area was assessed as relatively good. This was especially the case in Sweden, though less so in Germany. Horizontal coordination across policy areas was a problem in all countries, but mostly so in Denmark. Coordination with regional and local government was also a problem in most countries, particularly in Norway and the Netherlands. Coordination with supranational and international bodies was a general concern across countries. Coordination with the private sector and civil society stakeholders was seen as quite good in the Netherlands and also in Denmark, but as rather poor in Norway and Sweden.

CORRELATIONS BETWEEN COORDINATION MECHANISMS, CULTURE AND QUALITY

Statistical correlations between coordination quality and structural and cultural features are in general not very strong (Pearson’s *R* between .01 and .27; table 6). Moreover, many of the correlations are not statistically significant. This is especially the case for the correlations between coordination quality and the hierarchical coordination mechanisms.

TABLE 6 *Pearson’s R between coordination quality and structural and cultural features*

<i>Coordination quality</i>	Vertical/ within own area	Horizontal/ between areas	Local/ regional	Supra-/ international	Private/civil society
<i>Structural features</i>					
Administrative hierarchy	.03	.05	-.05	-.08	.01
Political hierarchy	.11	.09	.00	.09	.02
Special purpose org.	-.08	-.03	-.07	.06	-.08
Cross-cutting work groups	.11	.08	.01	.08	.20*
Cross-cutting policy arrangements	.27*	.05	.13	-.04	.13
Lead organization	.06	.14	.23*	.01	.02
Consult civil society/ private sector	-.09	.00	.10	-.02	.25*
Consult experts	.03	-.05	-.06	-.12	.12
<i>Cultural features</i>					
Finding joint solutions	.11	.13	.22*	-.04	.04
Getting public organizations to work together	.24*	.18*	.11	.11	.19*

*: sign: .01.

The use of cross-cutting working groups and consulting stakeholders in the private and voluntary sectors has a statistically significant effect on the perceived quality of coordination among these actors. Lead agency arrangements also have a statistically significant positive effect on coordination with local and regional authorities. Cross-cutting policy arrangements vary positively with the perceived quality of vertical coordination within their own policy area, indicating that hierarchy and cross-boundary arrangements work in tandem.

The correlation analysis further shows that a strong coordination culture goes hand in hand with a positive assessment of coordination: a culture oriented towards finding joint solutions to solve problems of public concern is statistically significant and positively correlated with the perceived quality of coordination with local and regional bodies. A culture oriented towards getting public organizations to work together is also statistically significant and positively correlated with both vertical and horizontal coordination and with good-quality coordination towards the private sector and civil society.

DISCUSSION

Our descriptive analysis of coordination structures in six countries demonstrates that no single principle of organization dominates the crisis management area. Despite recent reforms, there does not seem to be any convergence around a common organizational model. We see differently balanced hybrid solutions. At the same time, there is a tendency to streamline national crisis organizations into institutions that have coordination of other central administrative bodies as a main task. This does not imply a convergence towards an all-encompassing 'lead agency model' wherein all relevant activities are transferred to tailor-made institutions, however. Major crises are seldom confined to one ministerial area alone and will therefore inevitably unleash coordination pressures. The emergence of tailor-made agencies as well as intermediate coordination arrangements at the central level supplements, rather than replaces, patterns of responsibility and accountability that characterize the central administrative apparatus in 'normal' times. They are activated in times of crisis, but do not normally alter existing arrangements and institutions in a significant way.

Our quantitative analysis shows that the use of specific coordination mechanisms influences and enhances perceptions of coordination quality. Those who frequently use different mechanisms – either hierarchy based or network based – tend to value coordination within these areas positively. Overall, the correlations between coordination arrangements and perceived coordination quality are not very strong, however. It is also quite difficult to see any systematic variation along the different dimensions.

Our expectations drawn from the structural–instrumental perspective regarding the use of the different coordination arrangements and their influence on coordination quality, whether they are hierarchical or network based, find limited support. This corresponds with a main finding in the ANVIL project (see endnote 1 and Bossong and Hegemann 2013).

It seems that the cultural dimension does influence perceptions of coordination quality in a more profound way than structural features, however. A cultural perspective underlines the importance of administrative culture and national variations. We measure coordination culture in terms of how strong the public sector values 'getting public organizations to work together' and 'finding joint solutions' are. These cultural indicators are important in the field of crisis management and in dealing with 'wicked problems' that cross policy

areas and administrative levels. We find that they are related to the executives' assessment of coordination, supporting the hypothesis that administrative executives who have a 'strong' coordination culture also value horizontal coordination. Adding to this, the qualitative method-based mapping section shows that cultural features matter.

Another, more rough, proxy for administrative culture would be to differentiate by country. A preliminary analysis based on our survey data revealed that the country the administrative executives resided in had some, but only limited, effect on their assessment of coordination quality. Such country differences might reflect features other than domestic administrative culture, however. It is hard to specify exactly what different administrative cultures mean in different countries. Developing better proxies for administrative culture in this policy area may be one important way forward.

A main finding in our analysis is that the kind of coordination used is not necessarily related to how coordination quality is evaluated. One explanation might be that our measures are too crude, or that such relations are too subtle to capture through survey data alone. The loose coupling between coordination instruments and coordination quality, might indicate that administrators in this area tend to follow established rules and routes (paths) rather than new ones based on a judgement of what seems to work. This needs further analysis and more sophisticated data to be fully answered, however.

One way forward would be to assess whether and in what way these perceptions and relations are affected by actual crises. We would expect variation according to the type of crisis – whether it is a localized or a transboundary crisis, large or small, characterized as routine or unexpected, man-made or natural (Christensen *et al.* 2015). In this article we have mainly addressed the strategic level, but distinguishing more clearly between the operational and strategic levels, and also between emergency preparedness and crisis management, would most probably make a difference.

Our analysis leads to an observation that national public administrative arrangements for dealing with crises are composite and tend to combine various elements that may be contradictory, but still create stability (Olsen 2007). Rather than adopting a single organizational recipe, hybrid systems have emerged in which hierarchical and collegial measures coexist, supplement, but also sometimes challenge each other. Different public sectors often rely on such mixed arrangements. We should remember that most 'pure' organizational arrangements are ideal types, perhaps serving more as heuristic devices than as real world phenomena (Pollitt and Bouckaert 2011). The development of these structures within the area of crisis management can also be seen as a case of what Streeck and Thelen (2005) call institutional layering, a result of a process where new institutional elements are added to existing ones over time. As a result, power relations change and definitions of problems and policy alternatives become more complex and more difficult to disentangle (March and Olsen 1996).

The balancing of different and potentially conflicting principles enhances flexibility and may facilitate further change or adaptation. However, the opposite may also be the case, as conflicting principles may balance each other out and create challenges for further stability (Olsen 2007). Stability in this case implies that reorganization efforts aiming to clarify demarcation lines between organizations and generate new overarching coordination capacity yield meagre operational effects, not leading to the expected adjustments in the distribution of powers, competencies and responsibilities.

Summing up the analysis, three main points can be highlighted. First, there is no evident convergence of crisis management structures, coordination arrangements and processes – despite some shared trends. Second, coordination quality is not directly connected

to coordination structure; path-dependency and administrative culture likely play a comparably greater role. Third, there are partly inconsistent hybrids in operation, which seem to work provided that the culture of coordination is good enough.

CONCLUSION

Our article combines insights into formal structural arrangements for national crisis management in six countries with data on the actual coordination mechanisms used by top civil servants, existent coordination culture and prevalent perceptions of coordination quality. The structural variations concerning centralization/decentralization and the use of hierarchical mechanisms, lead agencies and network arrangements are large. The link to perceptions of coordination quality is complex, loose and ambiguous. Cultural features are more important explanations for coordination quality.

An administrative culture emphasizing coordination has gained a strong footing in European public administrations and is linked to larger reforms within the public sector focusing on coordination (Lægreid *et al.* 2015). This administrative reform trend is particularly relevant within the area of crisis management. Still, evidence-based knowledge about the impact of such reforms and of novel coordination instruments is somewhat incomplete.

A main conclusion is that there is so far no one best solution or coordination formula that can harmonize competing interests, overcome uncertainty and ambiguous government structures and make policy choices that everyone will accept. Contemporary governmental systems in general, and those within crisis management in particular, are characterized by interdependencies and diversity, which exert strong pressure for coordination to be multi-dimensional. Finding a workable 'smart practice' (Bardach 1998) or a balance between hierarchical instruments and network solutions is complicated and context-dependent. The main reform challenge seems to be the loose coupling between structural arrangements and practice. Structural arrangements are often broad categories which allow great variations in practice. This is not necessarily a problem, however, for it also offers leeway for flexible adjustments needed to deal with variations in the magnitude and type of crisis.

One crucial question pertains to the political relevance and consequences of the diversity in crisis management described. If we accept that there is no best practice, diversity might be seen as a potential strength. A lesson from our analysis is that adaptation to the national context and to the specificities of different crises might be the only way forward. Institutional complexity and ambiguity might be, as Boin *et al.* (2013) have also argued, limiting factors for the development of sufficient crisis management capacity. Precisely for this reason there is a need to discuss the combination of networks, hierarchy and lead agency models, not only at the level of the European Union (Boin *et al.* 2014), but also at the national level.

NOTES

¹ For a more comprehensive overview of the policy area, see the ANVIL project: www.anvil-project.net.

² The survey covers 16 countries and was conducted as part of the COCOPS project. See <http://www.cocops.eu> for more information.

³ The response rate was 40 per cent in Sweden, 29 per cent in the Netherlands, 28 per cent in Norway, 23 per cent in Germany, 19 per cent in Denmark and 11 per cent in the UK. Of the subsample, 21 per cent worked in a ministry and 60 per cent in a government agency. In Germany, 20 per cent came from the *Länder* (federal state) level. Forty-four per cent were in top positions, 38 per cent worked in the second highest positions and 18 per cent were from the third highest level.

⁴ Values from 1 (=crisis and incident driven) to 10 (=planned). Answers 1–3 = crisis and incident driven, 7–10 = planned.

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