



Wirtschafts- und Sozialwissenschaftliche Fakultät

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Suggested citation referring to the original publication:
Governance : an international journal of policy and administration and institutions 34 (2020) 1, pp. 171 - 189
DOI <https://doi.org/10.1111/gove.12486>
ISSN 0952-1895, 1468-0491

Journal article | Version of record

Secondary publication archived on the Publication Server of the University of Potsdam:
Zweitveröffentlichungen der Universität Potsdam : Wirtschafts- und Sozialwissenschaftliche Reihe 165
ISSN: 1867-5808
<https://nbn-resolving.org/urn:nbn:de:kobv:517-opus4-514264>
DOI: <https://doi.org/10.25932/publishup-51426>

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Mapping the black box of intraministerial organization: An analytical approach to explore structural diversity below the portfolio level

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Funding information

Deutsche Forschungsgemeinschaft,
Grant/Award Numbers: JA 387/6-1, FL
690/3-1

Abstract

This article explores the structural diversity of intraministerial organization over time. Based on organization theory, it proposes a generic typology for intraministerial units applicable to any hierarchically structured government organization. We empirically investigate the critical case of the German federal bureaucracy. By classifying its subunits, we analyze the longitudinal development of structural differentiation and its correspondence to denominational variety. The data stem from a novel international dataset, covering all ministries between 1980 and 2015. We find that intraministerial structure differentiates over time, across and within ministries. A stable core of traditional Weberian structure is complemented by structurally innovative intraministerial units. We conclude that the German federal bureaucracy is more diverse than suggested in previous literature. Our findings indicate that less Weberian bureaucracies are at least as structurally diverse and that more reform-driven bureaucracies will have experienced at least as many changes in structural diversity.

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1 | INTRODUCTION

If central government organizations constitute the “machinery of government” (Hood, 1979), then intraministerial units¹ including divisions, subdivisions, and sections are the essential parts of this machinery. These units structure part of the executive arena through which governments formulate and implement policies (Egeberg, 1999; Pressman & Wildavsky, 1973; Wilson, 1989). Even though intraministerial units fulfill these crucial functions, the analysis of ministerial “subpopulations” is a blind spot in the literature on government organizations (see Adam, Bauer, Knill, & Studinger, 2007; MacCarthaigh & Roness, 2012, p. 849; Döhler, 2015).

This study aims to explore this “black box” of intraministerial organization by systematically investigating the longitudinal development of its diversity. The article asks how and to what extent the structural composition of intraministerial organization varies over time. Informed by organization theory, we develop an analytical framework that sorts intraministerial units using the dimensions subordinated capacity, hierarchy, affiliation, and mandate. With the resulting typology one can assess structural diversity in various contexts independent of the units’ labels and across different political systems.

We apply this typology to the intraministerial landscape of German federal bureaucracy from 1980 to 2015 as a critical case. German federal ministries are considered a prototype of a Weberian bureaucracy. The data are drawn from the German subset of a new comprehensive, international data set on structural changes. It covers the entire ministerial government organization over the last three decades. Employing a longitudinal mixed-method design, we cluster all intraministerial units into types, and explore their development with the help of descriptive bivariate statistics. In addition, we analyze how the variety of their formal denominations (such as “division” or “project group”) converges or diverges with the degree of structural differentiation. We find that the degree of structural differentiation, that is, number of types of intraministerial units, increases over time—overall and per ministry. More specifically, a core of traditional Weberian unit types remains stable during the whole observation period, but it is slowly and steadily complemented by a number of structurally innovative types of units. Simultaneously, the variety of denominations increases as well. With this study we can show that even one of the most traditional Weberian bureaucracies has structurally diversified over time, which suggests that this development could be more extensive in less Weberian and/or more reform-driven countries.

The next section discusses the state of research on the internal structure of ministerial bureaucracies. We then present our framework for the analysis of intraministerial structure and our research design. The last sections discuss our findings and conclude.

2 | STRUCTURE OF INTRAMINISTERIAL ORGANIZATION: STATE OF THE ART

In public administration research, attempts to classify government organizations usually concern a macro-perspective. Studies differentiate between types of government organizations in general (Blondel, 1981; Rolland & Roness, 2010; Wettenhall, 2016), types of ministerial departments and agencies (Hood & Dunsire, 1981), or types of agencies (for many: Bach & Jann, 2010; Van Thiel, 2012). By adding a longitudinal perspective, a range of different mapping projects has recently advanced the study of government structures. They were primarily interested in questions of structural continuity and change within and across countries. Contributions on changing central bureaucracies from Estonia, Hungary, Ireland, Lithuania, and Norway (published in a Special

Issue of the International Journal of Public Administration, 2012) and Belgium (specifically the Belgian State Administrative Database; see Wynen, Verhoest, & Kleizen, 2016) are informed by the earlier work of Norwegian researchers who set up the Norwegian State Administration Database (see Rolland & Ågotnes, 2003). These mapping projects mostly follow a categorization that distinguishes public sector organizations based on their legal form and their degree of managerial autonomy (Van Thiel, 2012; MacCarthaigh & Roness, 2012, p. 775).

Other literature touches upon the structural design of intraministerial organization when discussing ministerial (re)organization in specific policy fields (Mätzke, 2010; Müller, 1986) or the role of ministerial subunits with particular tasks, such as executive staff units performing for example leadership support, policy advice, or control tasks (Brans, Pelgrims, & Hoet, 2006, pp. 65–67; Hustedt, 2013, 2018). One argument runs that a task's specific organizational format may influence its role in intraministerial decision making. For example, Hustedt argues that it matters where planning units are located. When units belong to executive staff units directly subordinated to the political leadership, they have the potential for more strategic policy-relevant output than those organized in the line hierarchy (Hustedt, 2013, p. 209).

Only few studies explicitly focus on the structural design, task, and performance of specific formats of units in organizations, such as “task forces” or “project groups.” For example, project groups are described as “structurally innovative” (Scott & Davis, 2016, p. 130), because—bound by a common objective—they cut across the existing line organization pulling together expertise from different parts of the ministry, sometimes even from outside the ministry. This setup allows for more nonhierarchical teamwork than decision making in the permanent core of line units and potentially results in an “increased flow of information” (Scott & Davis, 2016, p. 130). In ministries, this usually temporary organizational format is used for complex planning and executing tasks, such as administrative or policy reforms or the organization of large-scale events. Some suggest—if certain conditions such as a short time of existence (Tolbert & Hall, 2009, p. 137) are met—this format more effectively tackles complex, nonroutine interorganizationally relevant issues than the permanent line organization (Englich & Fisch, 2002), others are more skeptical (Laux, 1971).

Thus existing research, especially comparative research, on structural aspects of government organization mainly focused populations of organizations, and organizations as units of analysis. Scholars stress the lack of comparisons between subpopulations of public bodies (see Adam et al., 2007; MacCarthaigh, Roness, & Sarapuu, 2012, p. 849)² and in general report a lack of interest for the relevance of intraministerial organization (Döhler, 2015). This is curious for two reasons: first, the structural organization of intraministerial subunits helps to answer general questions on the structure of government, such as questions about its complexity (i.e., structural differentiation) or its size, with information from the more fine-grained level of subunits. Information on the structural development of subunits contextualizes, but potentially even challenges empirical evidence collected at a superior level due to different developments at the subordinate level (for a general argument see Tolbert & Hall, 2009, p. 26), as we find in our data. In order to understand the full variety of government organization, we aim to extend the critical classification endeavor of the existing literature to the subministerial level. Our empirical findings contribute to the mapping of the state literature with a systematic, longitudinal overview of the structural differences and similarities between intraministerial organizational entities in a critical case, the German federal bureaucracy. Our typology is a conceptual contribution to this literature's comparative descriptive endeavors and could theoretically be applied to all hierarchically structured government organizations.³

Second, understanding the design of intraministerial units is relevant, because the formal internal structure of ministries is of pivotal importance for executive policymaking (Egeberg, 1999,

2012). It defines formal communication, influences formal decisions and work processes initially and eventually even informal ones (Weber, 2010, p. 703) and shapes “information exchange, coordination processes and conflict resolutions” within an organization (Egeberg, 1999, p. 162). At the same time, when formal ministerial structure is examined as dependent variable (such as in contingency theory or the politics of structural choice theory), it is considered affected by different internal and external factors, including political preferences and strategies. For example, any decision to establish the aforementioned “project groups” as a structural innovation comes with specific intentions on the one hand and intended and/or unintended effects for communication and coordination processes on the other. For both directions of investigation—intraministerial structure as dependent variable or as independent variable—a comprehensive classification of the black box ministerial bureaucracy at the unit level could guide case selections and contextualize empirical findings. Because this is an explorative study that presents new concepts and new empirical findings, the following organization theory-based framework is focused on analytical description, not explanations. In the expectations and findings sections, we discuss potential drivers for structural diversity, in order to show the typology’s potential for future research avenues.

3 | ANALYTICAL FRAMEWORK

In organization theory, much research is dedicated to describing and understanding variations in formal (intra)organizational structure (Tolbert & Hall, 2009, pp. 19–67), but so far no established systematic classification of intraministerial units exists. Our framework therefore includes a generic descriptive typology, distinguishing intraministerial structure at the unit (micro) level. We also propose three indicators that capture different aspects of structural diversity per ministry (at the meso level) and across ministries (at the macro level): structural differentiation, denominational diversity, and ambiguity. Following established work on the structure of governments, we understand formal organizational structure by distinguishing it from (decision making) process (Hood & Dunsire, 1981; Scott, 1981, p. 57). Specifically, Hood and Dunsire (1981, p. 57) refer to organizational structure as a collection of basic organizational elements, or intraministerial units, forming “[...] an organization’s ‘skeleton’, framework or anatomy, as opposed to the way in which the various parts actually operate in the administrative process.” In order to capture core aspects of these organizational elements, our typology includes the dimensions hierarchy, affiliation, subordinated capacity, and mandate. Those dimensions are based on theoretical groundwork in public administration that highlights the relevance of formal structure for the decision-making processes of (public) organizations (Gulick, 1937; Mintzberg, 1979; Simon, 1997; Weber, 2010) and more recent work on the specifics of intraorganizational units (e.g. Egeberg, 1999, 2012; Scott & Davis, 2016).

In combination as unique types of intraministerial units, the dimensions describe the formal position of the different parts of this skeleton and their potential role in ministerial decision making. Usually, government organizations display their division of labor through organization charts, and these four dimensions are central to such self-descriptions of organizations.

3.1 | Hierarchy

The term vertical specialization refers to the division of work across hierarchical levels (Egeberg, 2012, p. 5). Weber addressed office hierarchy as a principle of bureaucracy describing

“a firmly ordered system of supra- and subordination in which there is a supervision of the lower offices by the higher ones” (Weber, 2010, p. 703 f.). The level of an organizational unit indicates its proximity to the ministerial executive. A higher level increases the likelihood of direct contact with the leadership (Christensen & Lægred, 2009, p. 16). Given that the attention of political leaders is limited, the issues that are organized closest to them will get more attention than those organized further away, an assumption derived from the phenomenon known as the “bottleneck of attention” (Simon, 1997, p. 241).

3.2 | Affiliation

Affiliation differentiates between staff and line positions of units in the ministerial hierarchy, not their task or function (e.g., Blau, 1962, p. 172). Essentially, staff units operate separate from the line organization and cannot give direct orders to line units (Gulick, 1937; Mintzberg, 1979, p. 20). Usually, staff units are more flexible and independent, as they are outside the line hierarchy and thus not part of the line organization's chain of command. Instead, they are directly subordinated to the ministerial executive or the division head (see König, 2015, p. 275; Mayntz & Scharpf, 1975). However, this also means that they are isolated from hierarchical work processes and have no access to the resources of line units (König, 2015).

3.3 | Subordinated capacity

Subordinated capacity refers to the resources that intraministerial units have at their disposal. Budgetary and human resources influence a unit's capacity to contribute to ministerial decision-making processes. For example, the number of staff within an organizational unit indicates the “organization's capacity to initiate policies, develop alternatives, or to implement final decisions” (Egeberg, 2012, p. 5). Resources might also be an indicator of the importance of a unit's task compared to other units (Egeberg, 2012, p. 5; Pfeffer & Salancik, 2003, p. 230). Subordinated units can be seen as a proxy for a superior unit's budgetary and human resources, as they are the organizational “containers” for a certain number of positions and a specific budget. The more units a superior unit has at its disposal, the more it can contribute to the ministry's decision making and the more important its task may be.

3.4 | Mandate

Mandate refers to a unit's temporal limitation at the time of its creation. Units with a non-permanent, that is, temporary, mandate are created with a limited lifespan due to the finite nature of their tasks. They have an “expiration date” (Mayntz & Scharpf, 1975, p. 76; Scott & Davis, 2016, p. 130). While units with a permanent mandate may terminate at some point, too, the length of their survival and point of termination is not predefined. A temporary mandate implies temporal limitation of staff employment. Permanent units are associated with permanent staff, whereas a temporary unit disposes of delegated staff from different organizational entities or staff that is specifically hired for a limited term (Mayntz & Scharpf, 1975, p. 76; Egeberg, 2012, p. 6).⁴ The predefined life span of the unit may lead to a quicker decision-making processes, as a clear goal has to be reached in a limited amount of time.

3.5 | Typology and expectations

Table 1 summarizes the four dimensions and their characteristics. Each combination of different values constitutes a specific type of intraministerial unit.⁵

We introduce three sets of expectations. In bureaucracies, units with staff affiliation and/or a temporary mandate, such as the aforementioned “project groups” and “task forces,” are not part of “conventional hierarchies” and considered structurally innovative (Scott & Davis, 2016, p. 130). These new organizational forms indicate “collegial” interactions (Egeberg, 2012, p. 6), especially when the characteristics staff affiliation and temporary mandate are combined. A typical unit in a Weberian ministry is part of the line hierarchy on the first or second hierarchical tier, has a high subordinated capacity, and a permanent mandate. We expect that the more Weberian a bureaucracy is, the more such traditional hierarchical arrangements will dominate.

When observed at the meso and macro level, the variety of types occurring at the same time is understood as a form of structural differentiation. According to Tolbert and Hall, structural differentiation (or complexity) is one of the core dimensions of organizational structure at the meso and macro level (2009, p. 26) and consists of three sub-dimensions, of which horizontal complexity is the most researched. It describes the way and the extent to which an organization, its tasks and responsibilities are subdivided, and is a measure to which public administration research often refers (e.g., Christensen & Læg Reid, 2010). When conceptualized as units, it can be quantitatively measured as the number of different subunits within an organization (Tolbert & Hall, 2009, p. 28). It is assumed that increased complexity equals greater specialization of the units, potentially leading to more effective work processes, but also more challenges for the coordination and control of the organization across subunits (Tolbert & Hall, 2009, p. 29).

In our study, we measure the degree of structural differentiation at the meso and macro level as the number of intraministerial types that are in operation simultaneously and examine their development over time. Based on previous research, some empirical results seem more plausible. Studies on government organization suggest that state structures have become more differentiated over time, arguing that this is a response to increasingly complex societal developments (e.g., Christensen & Læg Reid, 2010; Peters, 2001, p. 377 f.). Following these observations, we expect that over time and on average, we will observe an increase of structural differentiation within ministries. In addition, we know that since the 1980s a series of administrative reform trends in Europe provided ample opportunities for structural changes in government organizations. These included New Public Management reform attempts (Christensen & Læg Reid, 2005; Hood, 1991; Pollitt & Bouckaert, 2017), followed by a so-called post-NPM reform trend toward increased (re-)integration in the 2000s (Christensen & Læg Reid, 2007; Pollitt,

Dimension	Value
Hierarchy	0 = second level 1 = first level
Affiliation	0 = staff 1 = line
Subordinated capacity	0 = low 1 = high
Mandate	0 = temporary 1 = permanent

TABLE 1 Dimensions of formal structure

2003). While the objectives of the NPM reforms include structural decentralization (Gualmini, 2007) the subsequent post-NPM reforms focused on recentralization, both possibly resulting in changes to the structural diversity of the central government as a whole and within ministries by establishing or terminating types of units that are in line with the respective reform goals or assist in implementing said reforms. For instance, as a result of post-NPM reforms, one could think of new intraministerial structural types for integrative purposes or units that perform controlling or steering in the phase of reintegration. We would expect that countries that were responsive to one or both reform trends change in their degree of structural differentiation.

Another aspect of structural diversity is denominational diversity. Denomination refers to a unit's name or label. Part of our research motivation stems from our own and previous empirical observations (Englich & Fisch, 2002, p. 119) in the German case: Names of organizational units are not automatically indicative of these units' structural characteristics. Theoretically, this could be explained by the neo-institutionalist reasoning that denominations as the most prominent feature of formal structure can express fashions, fads, or myths (Meyer & Rowan, 1977). They may serve as a “legitimizing façade” in relation to the organization's environment (Egeberg, 1999, p. 157), and can be detached from other aspects of formal structure. We follow this line of argument and measure denominational diversity independent of structural differentiation and are interested in its development. In addition, we examine to what extent developments of structural differentiation and denominational diversity converge or diverge over time. The relation between denominations and types is captured by an ambiguity rate. One could argue that ambiguous, that is, potentially misleading, denominations do not match the criteria of a well-ordered Weberian bureaucracy and therefore expect Weberian bureaucracies to be less denominationally diverse and ambiguous than less Weberian ones.

4 | RESEARCH DESIGN, CASE SELECTION, AND DATA

We pursue a mixed-methods approach combining qualitative and quantitative methods and data (Creswell & Clark, 2011). Typology conception is a qualitative research method (Collier, LaPorte, & Seawright, 2012) and typologies are a widely used analytical classification tool to form concepts with the aim to reduce empirical complexity (Bailey, 1994, p. 12). Each type of intraministerial units represents a unique combination of the categories of the dimensions and serves as a “fact-sorting data container” (Sartori, 1975, p. 17). For the analysis, empirically observed units are assigned to types based on their structural similarity and disregarding the unit's denomination. Using descriptive bivariate statistics, we assess the number of types and their frequency distribution over time—per ministry and across ministries. The longitudinal perspective of 35 years enables us to study long-term developments of structural diversity and covers the main administrative reform periods that could have provided windows of opportunity for structural changes.

4.1 | Case selection

We study structural diversity by examining the development of intraministerial structures in the German Federal bureaucracy from 1980 to 2015. From a comparative perspective, Germany constitutes a “critical case” (Flyvbjerg, 2006, p. 230) for two reasons. First, with regard to their formal structure, German federal ministries are considered to be the “prototype” of a

well-ordered Weberian bureaucracy (Derlien, 2005). They are highly hierarchical, formalized, and embedded in a legalistic administrative culture (Pollitt & Bouckaert, 2017, p. 298; Peters, 2001, p. 129). A typical Weberian bureaucratic structure is built using divisions as their main organizational unit, and is characterized by hierarchical centralization (Gualmini, 2008) and line organization (Jann, 2003). Second, the portfolio distribution of federal ministries has remained relatively stable over time, despite changing governments (Derlien, 1996, p. 560) and administrative reform trends (Bach & Jann, 2010; Derlien, 2005). Even the aforementioned NPM reform did not lead to a “real reform of the formal structure of ministries” (Gualmini, 2007, p. 80). Moreover, other opportunities such as the unification and the partial moving of the federal government in 1998 were not used for a large-scale structural reform (Schröter, 2007, p. 252 f.; Jann, 2003, p. 115). Hence, the German case seems suitable for the generalization of our findings across certain bureaucratic systems: If we find our expectations supported, we may posit that the degree of structural diversity is at least as high, if not higher in less Weberian countries. In countries affected by NPM and/or post-NPM reforms, we would expect to see at least as much, if not more change in the different indicators of structural diversity.

The German administrative system is vertically decentralized. Federal ministries are planning organizations that mainly develop policies whereas policy implementation is almost exclusively done by the state government (“Länder”) or below (Schröter, 2007, p. 252). The responsibility for organizational matters is horizontally decentralized. Once portfolios are allocated and reorganized during coalition negotiations (Derlien, 1996; Sieberer, 2015), the internal design of ministerial organization is the prerogative of each minister (Böckenförde, 1964, p. 147). For this, the *Joint Rules of Procedures of the Federal Ministries* (GGO) constitute collective, but legally nonbinding guidelines (König, 2015) for the formal design of German ministries by specifying organizational principles. They outline a standard organizational setup of a formal line hierarchy: with sections as basic working units at the third level, divisions comprising of “at least five sections” (GGO, 2011, § 8) at the first level and subdivisions only to be established as intermediate layer if necessary and if comprising of five subordinated sections (König, 2015, p. 277).⁶

4.2 | Description of the data

The data on intraministerial structure are drawn from the German subset of the new event-based SOG-PRO data set mapping all structural changes in ministries in four European countries from 1980 to 2015.⁷ The subset comprises all organizational units at the first and second hierarchical level in every German federal ministry and contains information on their names, number of subunits, and position in the hierarchy.⁸ It is based on a content analysis of more than 2,000 organizational charts, state almanacs, and task allocation plans. For the following analysis we created a panel data set (1980–2015). We collected additional data from official documents to code the *mandate* dimension, assigned units to types based on our typology, and calculated annual figures describing the (relative) frequency of types, structural differentiation, and denominational variety and ambiguity.⁹

4.3 | Operationalization

Subordinated capacity is measured by the number of subordinated basic working units. A unit with more than two subordinated basic working units is considered high capacity.¹⁰ We assume

that units with up to two subordinated basic working units typically fulfill support functions. With three or more subordinated units, it is more likely that they add substantive working capacity to their superior unit by an increased differentiation of tasks. The dimension *hierarchy* indicates a unit's level. The first hierarchical level includes all units that are directly below the ministerial executive either subordinated to the minister or to the permanent state secretaries (Mayntz & Scharpf, 1975, p. 90).¹¹ The second level includes all units that are directly below first level units. With *affiliation* we measure the distinction between line and staff units. Line units are located within the ministerial divisional structure; staff units are located outside the divisional structure (Mayntz & Scharpf, 1975, p. 108). *Mandate* differentiates between temporary and permanent units. If the unit's task or its description in any of the sources indicated that it has a limited life span, it was marked as temporary.

In the analysis of denominations, we assigned any reference to an organizational format (e.g., “division,” “group”), role or position (e.g., “commissioner”), function (e.g., “planning”) or unique combination thereof (e.g., “planning task force”) as a unit's main denomination. An average of around 4.8% of units do not include any of these references in their labels, and instead only refer to their task (e.g., “public relations,” “health policy”).¹² An ambiguity rate measures denominational variety across types. It assesses the relation between a denomination and the number of types in which it occurs, weighted by the relative frequency of units with that denomination per type. The rate ranges from 0 to 1. The greater the spread of a denomination across types, the more ambiguous the denomination and the higher the rate.

5 | FINDINGS

In this analysis, we examine the development of the structural dimensions, structural differentiation as well as denominational variety in the German federal bureaucracy over time—both across ministries and per ministry.¹³

5.1 | Conventional hierarchy or structurally innovative?

The line graph of Figure 1 shows the development of the four dimensions across ministries and the average per ministry.

We observe an increase of second level units (60.9–68.4% per ministry) and of units with low subordinated capacity (25.3–36.0%). The share of staff units varies over time, but mostly oscillates around 23%. They consistently make at least about a fifth of the units of the average ministry. Temporary units gain popularity over time: Their share increases from 0 units in 1980 to 3.0% in 2015. While they could only be found in three ministries in 1980, they can be detected in all but three ministries in 2015.¹⁴

Simultaneously, intraministerial structure grew in size. The general population of units increased from 480 units in 1980 to 599 in 2015. The number of units per ministry increased as well, from an average of 26 units in the 1980s to 36 units for the last 10 observed years. It is structural differentiation mainly at the second level that drives the growth of the German federal bureaucracy, not an increase in the number of ministries or of first-level units. Growth takes place at levels not directly supervised by the ministerial executive and could indicate a growing preference for flatter hierarchies (see also König, 2015, p. 418).

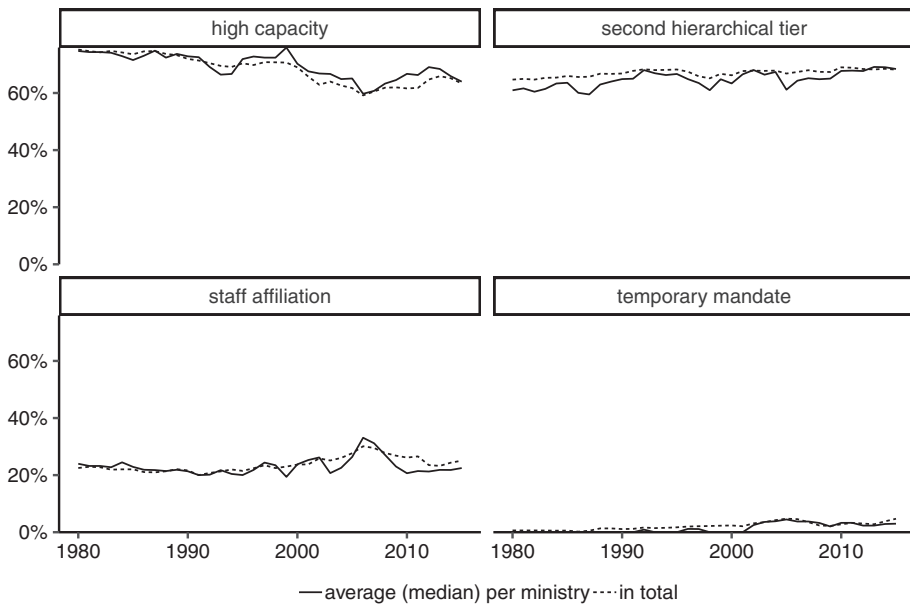


FIGURE 1 Structural dimensions over time. Each line graph represents the relative share of units

In sum, we find mixed results for our first expectation. A growing share of units with non-Weberian structural characteristics can be confirmed in the case of temporary units, but not for staff units. The share of staff units, however, was quite substantial in 1980 already: Almost a fourth of all units were not part of the line hierarchy, but directly subordinated to the ministerial executive or administrative heads at the first level in the line hierarchy. This finding suggests that the formal structure for nonhierarchical communication and decision making was already there in 1980 and grew through the extension of temporary arrangements over time. In this regard, German ministries were already less Weberian than expected from the start of our observation period. We would thus expect, inter alia, that less Weberian bureaucracies have a higher share and increase in staff and temporary units.

5.2 | Increasing structural differentiation?

Out of 16 possible types of intraministerial units, we observed 12 empirically. They are displayed in Figure 2, a stylized organizational chart showing all possible appearances of those 12 types, and described in more detail in Table 2, which lists their structural characteristics and most frequent denominations.

The average annual shares show a very uneven frequency distribution between types. Across time, we found that almost 95% of all units belonged to one of the five most frequent types (Types I-V).¹⁵ Two of these can be found in all ministries every year: unsurprisingly, they are the *lower back-bone* (I) and *upper back-bone* (II) types, which match the Weberian ideal of hierarchical line organizations with high subordinated capacity at the first and second tier.¹⁶

On average per ministry, there are 14 *lower back-bone* (I) units most frequently named “sub-division” (“Unterabteilung”), and seven *upper back-bone* (II) units most frequently named “division” (“Abteilung”). While these absolute numbers remained stable over time, the relative

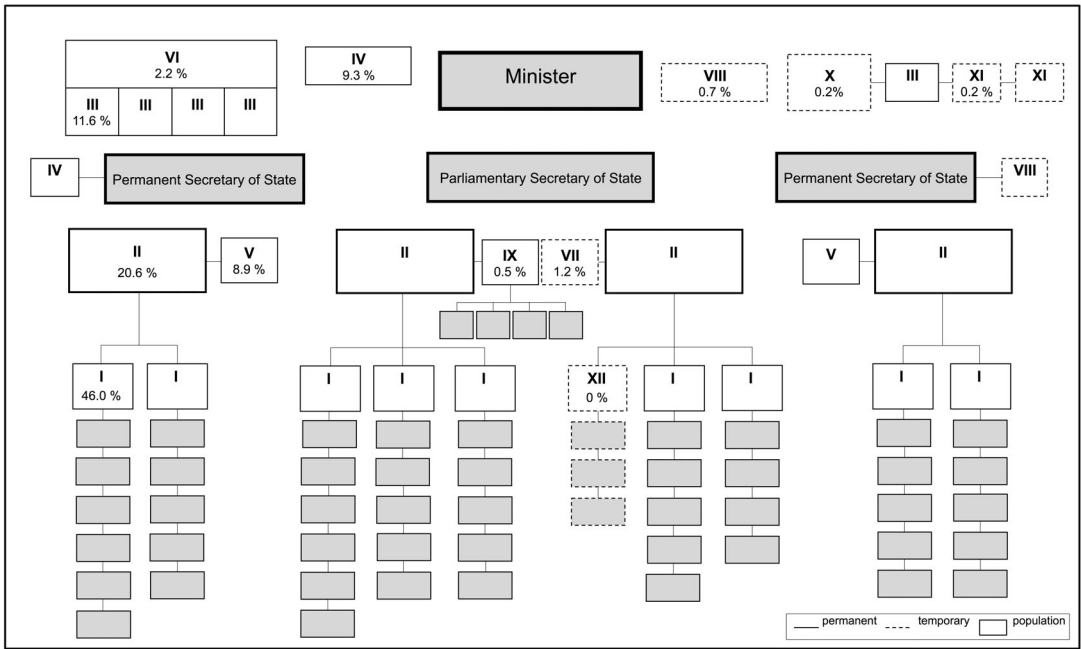


FIGURE 2 Organizational chart of the empirical typology. Each Roman numeral represents a type of intraministerial unit; the percentage indicates the median relative frequency of this type over time and across ministries

share of these types steadily decreased. In all cases over the course of this study, the basic structural setup of a ministry includes at least one additional type, usually units of the type *executive supporter* (IV). *Supporter* (V) units are almost as common and frequent. Directly subordinated to the political executive (*executive supporter*) or an administrative leadership position (*supporter*) as permanent staff units, both typically support the ministerial leadership with low subordinated capacity. For example, this is done through direct managerial assistance (e.g., “Bureau of the minister”) or through coordinating policy tasks (e.g., “Commissioner”). Vertebra (III) units are also frequent, though less widespread across ministries. They increase highly in frequency (4.8–15%) and in their dissemination across ministries over time.

The seven types remaining are rarer, each have an annual share of at most 2.2 %. Two of them are permanent “hubs” with high subordinated capacity and staff affiliation. They typically fulfill executive support functions at the first level as an “executive staff unit” (*executive support hub* (VI)) or gather policy tasks together outside the line hierarchy denominated as a “group” or a “commissioner” at the second hierarchical tier (*support hub* (IX)). The other five types are all temporary. *Seasonal supporter* (VII) and *seasonal vertebra* (XI) units appear from the beginning of our observation period and are located on the second hierarchical tier without subordinated capacity. The other three can be found on the first level directly subordinated to the ministerial executive from 1986 onward (type *seasonal executive supporter* (VIII)) and/or with high subordinated capacity from the 1990s (*seasonal executive support hub* (X) and *seasonal hub* (IX)). Our data show that the combination of a temporary mandate and high capacity remains a rare exception: Two types with that combination do not appear at all. Nevertheless, with the three types added from the end of the 1980s onward, we can observe that temporary units are used in more diverse structural settings.

TABLE 2 Properties of types

	Lower backbone (I)	Upper backbone (II)	Vertebra (III)	Executive supporter (IV)	Supporter (V)	Executive support hub (VI)	Seasonal supporter (VII)	Seasonal executive supporter (VIII)	Support hub (IX)	Seasonal executive support hub (X)	Seasonal vertebra (XI)	Seasonal hub (XII)
Hierarchy	Second level	First level	Second level	First level	Second level	First level	Second level	First level	Second level	First level	Second level	Second level
Affiliation	Line	Line	Line	Staff	Staff	Staff	Staff	Staff	Staff	Staff	Line	Line
Capacity	High	High	Low	Low	Low	High	Low	Low	High	High	Low	High
Mandate	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Temporary	Temporary	Permanent	Temporary	Temporary	Temporary
Five most frequent denominations	Subdivision 86.9%	Division 92.3%	Section (Referat) 56.7%	Section 20.0%	Section 27.1%	Executive Staff (Leitungstab) 41.9%	Project Group (Projektgruppe) 40.2%	Commissioner 25.6%	None 38.7%	Secretariat 56.4%	Task force 61.2%	Project group 100%
	Staff Division (Stabsabteilung) ^a 7.2%	Executive Staff of the Military Forces (Führungstab der (Teil-) Streitkräfte) ^a 3.8%	None 11.7%	None 13.4%	None 14.5%	Federal Commissioner (Bundesbeauftragter) 9.5%	Task Force 19.1%	Project group 24.5%	Group 22.9%	Staff (Stab) 36.4%	Commissioner 19.0%	Commissioner 15.2%
	Commissioner (Beauftragter) 4.0%	Bureau of the Minister (Ministerbüro) 7.8%	Bureau of the Minister (Ministerbüro) 7.8%	Bureau of the Minister 12.6%	Legal Adviser (Rechtsberater) ^a 9.3%	Press-/Information Staff (Presse- und Informationsstab) 9.4%	Working Group (Arbeitsgruppe) 9.3%	Special task 11.1%	Academy (Akademie) 19.3%	Task force 10.5%	Project group 15.2%	Project group 9.5%
	Group (Gruppe) 0.8%	Commissioner (Beauftragte der Bundesregierung) 0.7%	Commissioner 6.8%	Federal Government 9.0%	Preaudit Office (Vorprüfungsstelle) 7.7%	Organization Staff (Organisationsstab) 8.6%	Special task (Sonderaufgabe) 7.0%	Administrative office (Geschäftsstelle) 15.3%	Commissioner 15.3%	Commissioner 15.3%	Bureau (Büro) 9.5%	Bureau (Büro) 9.5%
	Staff (Stab) 0.5%	Management Division (Leitungsabteilung) 0.7%	Task Force 3.5%	Commissioner 8.4%	Commissioner 7.7%	Bureau of the Minister 6.4%	Administrative Office (Geschäftsstelle) 6.9%	Working group 8.2%	Task force 9.0%	Working group 8.2%	Working group 8.2%	Working group 8.2%
Portfolios	All	All	Many	All	Many	Many	Few	Few	Few	Few	Few	Few
Time period	1980–2015	1980–2015	1980–2015	1980–2015	1980–2015	1980–2015	1980–2015	1986–1988 1992–2015	1980–2015	1991–2007 2007–2011	1980–2015	1992–1997 2014–2015

^aDenomination only appears in Federal Ministry of Defence.

Note: Portfolios: all, units typically appear across all ministries; few, units typically appear in less than half of all ministries; many, units typically appear across more than half of all ministries.

Corresponding to existing research on the German case, we found that specific types grew in relation to the rest of the ministerial structure. Hustedt observed a trend of growing functional differentiation for units in charge of leadership support (2013, p. 247). Specifically, she finds that “the dominant organizational form within which staff functions are arranged”, the “executive staff” (“Leitungsstab”), considerably grows over time (Hustedt, 2018, p. 76), a kind of unit that would be categorized as *executive support hub* (VI) in our analysis. Structural differentiation due to the establishment of *seasonal executive supporter* (VIII), *seasonal executive support hub* (X), and *seasonal hub* (IX) corresponds to Hustedt’s observation that in the 1980s only a few units were organized as staff units directly below the departmental leadership. From 2000 onward, the number of “special tasks” units increased that were created to either perform policy or target group-oriented tasks (Hustedt, 2013, p. 255).

Additionally, in our analysis portfolio-related differences in the development of types became apparent. For instance, ministries representing crisis-prone policy-fields such as the Ministry of the Interior and the Federal Foreign Office show a comparatively steeper increase of units with a temporary mandate, staff affiliation, and low capacities.

We can support our second expectation: intraministerial structure diversified over the past 35 years. We found that structural differentiation across ministries increased over time. It grew from nine types in 1980 to 11 types in 2015. Compared to 1980, in 2015 the average ministry had grown by three additional types as can be seen in Figure 3. This shows that the increasing size of ministries went hand in hand with processes of structural differentiation, which is in line with some research on the relationship between organizational size and complexity (for an overview see Tolbert & Hall, 2009, p. 46 f.), suggesting that the larger an organization, the more differentiated it usually is due to for example, a greater need for specialization. This adds to previous research on the differentiation of public organizations: First, we not only observed quantitative differentiation (growth in number of units), but also qualitative structural differentiation (diversification of types of units). Second, in contrast to the stability of German federal ministries at the portfolio level, the size and diversity of intraministerial organization increased over time, showing that including the microlevel into the analysis gives us a more nuanced picture of government organization at the meso and macro level. In terms of generalizability, for countries such as the United Kingdom (Pollitt, 2013) or Italy (Gualmini, 2007, p. 80) with a greater response to public administration reforms, we expect intraministerial organization to experience more changes in their degree of structural diversity over time.

We found that intraministerial structure across ministries was more diverse than expected, with nine types already present in 1980, including five different types with a staff affiliation and two types with a temporary mandate. German intraministerial organization has been and is more diverse than the image of a traditional Weberian bureaucracy implies. This finding speaks to research on German federal agencies, stating that the agency landscape “has developed into a highly diverse ‘administrative zoo’ with various organizational species and sub-species” (Bach & Jann, 2010, p. 447). On average per ministry, structural differentiation was moderate in 1980, but increased over time. The majority of units formed a stable Weberian core in absolute numbers that was gradually complemented by structurally innovative units. All in all, this growing structural differentiation indicates that communication and eventually decision making has grown more decentralized, making coordination and control more challenging, but potentially also work processes more effective, as they are more specialized.

In our analysis of structural differentiation, we again found consistent differences between portfolios. Some ministries showed a comparatively low level of structural differentiation (including for example the Ministry of Justice and the Ministry for the Environment), whereas

others kept a comparatively high degree of structural differentiation (e.g., the Ministry of Transport and the Federal Foreign Office). This could indicate that, in the German case, portfolio related factors surpass shared challenges and joint organizational principles. This result is consistent with research on German agencies finding that their diversity was portfolio specific (Bach & Jann, 2010; Döhler, 2007). It seems worthwhile to examine systematically how and to what extent policy-field specific factors matter for the design of intraministerial structure, too.

5.3 | Diverse and ambiguous denominations?

We found that denominations diversify over time at a greater rate than types of units. While we detected a total of 77 different denominations, their variety increases from an average of 36 labels in the first 10 years up to 43 labels in the last 10 years of the observation period. The average ministry has seven denominations in 1980 and 11 in 2015 (see Figure 3). The frequency of denominations ranges from labels that appear throughout the observations period in all ministries to rarely used denominational “orchids.” The three most frequent denominations are, unsurprisingly, “subdivision” (41.3%), “division” (19.1%), and “section” (10.5%). Examples for orchids are “secretariat” (“Sekretariat”) that was used in two ministries only or “subject group” (“Sachgebiet”) that existed over a period of 9 years in two ministries with a low structural differentiation. Nine denominations are “mayflies,” existing only for a short period of maximum 3 years in one portfolio, for instance the label “cooperation center” (“Kooperationsstelle”). Such units represent an extremely small share of the population (on average only one unit per year). The relative annual share of denominations used across more than two ministries grew from ~24% in 1980 to ~44% in 2015, suggesting that denominations increasingly travel across ministerial borders. This observation could be an indication for the influence of fashions and myths on the “façade” of organizations, that make fashionable labels travel across ministerial borders due

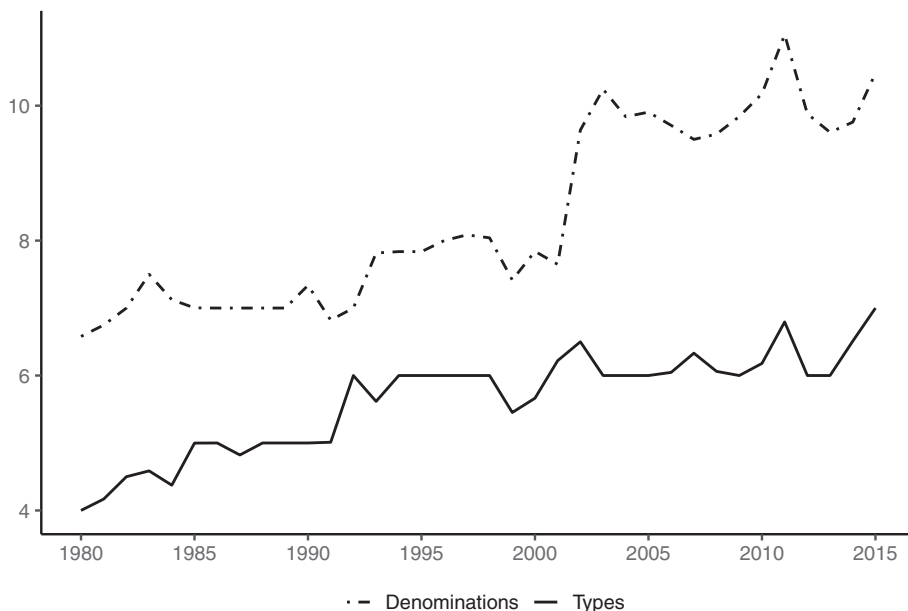


FIGURE 3 Development of structural differentiation and denominational variety per ministry

to legitimacy concerns. Denominational ambiguity slightly increases across the whole federal bureaucracy over time. Single labels were increasingly used for entities across different types. In that sense, organizational labels became less formalized and ministerial structures less Weberian. For research purposes, it also suggests that names of units—so far typically used to classify intraministerial entities—can be misleading for the analysis of types of intraministerial units, especially in the case of comparative endeavors (e.g., over time). One example for this is the label “task force.” Overall, “task forces” most frequently belong to *seasonal supporters* (VII). Another frequent denomination in this type is “project group.” Similar to them, “task forces” are often related to an event, a reform or another policy task with an expiration date and their establishment seems to be a common practice for organizing temporary responsibilities. In this way, they are considered as functional equivalents to “project groups,” showing how units with different names may fulfill a similar function in the organizational structure. Within the same ministry, though, one label almost always refers to intraministerial units of only one specific type, showing that ministries aim to stick to coherent labeling in their internal organization and possibly indicating a greater need to respond to portfolio-specific challenges and pressures through adequate names of units.

6 | CONCLUSION

This study broadens the knowledge on the diversity of intraministerial structure in central bureaucracies, an underresearched aspect in the literature. Our generic typology opens up viable possibilities for comparative research, because it can be applied to central, but also sub-national hierarchically structured government organizations in various countries.

Reflecting on the critical role of our findings from the German case, we argue that it is worth exploring to what extent other less Weberian and/or reform-affected countries have diversified or experienced changes in their structural diversity over time. Regarding the German case, one of the most promising explanations for the observed developments concerns portfolio-specific increasing needs to respond to more complex, and pressing issues such as crises.

Our conceptual work contributes to answering future explanatory questions. While we based our analytical framework on organization theory arguing that specific aspects of formal structure matter for communication and decision-making processes, future research might be able to show how and to what extent different intraministerial types or a combination of types contribute to these processes in central bureaucracies.

Our framework has the potential to contribute to current research agendas, specifically to what extent political and bureaucratic determinants can explain changes in government organizations. The literature discussing structural change, that is, the frequency and likelihood for transitions such as the creation of new government organizations, has recently turned its attention toward change within public organizations (Kuipers, Yesilkagit, & Carroll, 2017, p. 277). Across political systems, party-political explanations are relevant for such changes because they affect the design and lifecycle of public organizations (for many: Chen, Christensen, & Ma, 2019; Mortensen & Green-Pedersen, 2014). Others argue that instead, bureaucratic self-interest drives administrative reorganizations (e.g., Christensen, 1997). Following up on our research, it seems worthwhile to examine the extent to which party-political motivations and/or bureaucratic strategies also drive the design and the changes in structural diversity of intraministerial organization.

ACKNOWLEDGMENTS

This article is based on our work as doctoral researchers in the research project “The Structure and Organization of Governments” (www.sog-pro.eu). We thank all our colleagues who were involved in this project very much. We highly appreciate the feedback we received upon presenting earlier versions of this article at several conferences and seminars. In particular, we are grateful to Tobias Bach, Julia Fleischer, Martin Lodge, Külli Sarapuu, and Markus Seyfried for critical comments and helpful suggestions.

CONFLICT OF INTEREST

The authors declare no potential conflict of interest.

ENDNOTES

- ¹ A unit denotes a separate organizational entity within the ministerial hierarchy.
- ² Data on intraministerial units were collected in some of the aforementioned databases, but not systematically analyzed. Their classification was based on names (one exception: in the Norwegian database units are additionally classified according to their hierarchical level and tasks (MacCarthaigh et al., 2012, p. 846)). Our analysis will show that names do not necessarily uniquely identify types.
- ³ Due to its generic character derived from organization theory, the typology is applicable to any kind of hierarchically structured government organization, irrespective of the political system surrounding it. Of course, the institutional environment for executive organization differs greatly across political systems (e.g., parliamentary vs. presidential ones) and is likely to be part of the explanation for empirically detected differences in their structural diversity.
- ⁴ Notably, this understanding of mandate differs from the question whether a unit is installed in an ad hoc fashion or not.
- ⁵ Depending on the research question, the typology could also be expanded by additional dimensions, such as task (i.e., policymaking vs. managerial).
- ⁶ Since the last substantial amendment of the GGO in 2000, a total of five intraministerial units are broadly described as appropriate structural components of ministries in addition to the standard structural setup: units with staff functions to support the ministerial leadership; project groups for temporary, complex tasks; coordinators of the federal government; federal commissioners; and commissioners of the federal government.
- ⁷ The database was compiled as part of the comparative research project “The Structure and Organization of Governments” (www.sog-pro.eu).
- ⁸ The database and therefore the analysis do not cover units at the lowest (third) hierarchical level. The dominant type there comprises basic working units named “sections”—permanent line units with no subordinated capacity. Beyond this quite homogeneous picture, some structural diversity could have been discovered at this level. But given the extremely high numbers of monotonous third level units and the (usual) time limitations of the research project, it did not seem feasible to include them.
- ⁹ The data set and other supporting material are available on Harvard Dataverse at <https://doi.org/10.7910/DVN/C3NM76>.
- ¹⁰ We drew this qualitative distinction between low and high subordinated capacity at two subordinated units because we detected a quantitative difference in the empirical frequency distribution there. Units with one or two subordinated units are very rare among the units with subordinated capacity. From a subordinated capacity of three on, the share of units increases steadily.
- ¹¹ Executive leadership positions (minister, permanent or parliamentary state secretary) and their personal assistants are excluded from the analysis.
- ¹² In cases of multiple organizational references in the same denomination, we prioritized format references over others, assuming that formats describe the unit as a whole. With multiple formats referenced, we assigned the first format assuming that order indicates importance.

- ¹³ Unless stated otherwise, we use the mean value to calculate annual figures across ministries (e.g., the overall share of staff units per year). We use the median value for all comparative figures between ministries (e.g., the annual average per ministry) or figures over time, because these distributions are skewed.
- ¹⁴ The “Staff Unit Berlin Brandenburg Airport” (“Stabsstelle Flughafen Berlin/Brandenburg”) is an example of such a temporary unit. Established in the Federal Ministry for Transport and Digital Infrastructure in 2015, this unit with 10 employees controls the construction progress of the airport on behalf of the federal government (Delhaes & Kersting, 2015), a theoretically finite task.
- ¹⁵ The annual average share of all these types is at least 5%, in the majority of cases it is above 10%.
- ¹⁶ We could not find any case that combines line affiliation at the first hierarchical tier with low capacity, the two types with these characteristics were among the four nonobserved types. Given that hierarchical line organization implies the subordination of several units, this is a highly likely result.

REFERENCES

- Adam, C., Bauer, M. W., Knill, C., & Studinger, P. (2007). The termination of public organizations: Theoretical perspectives to revitalize a promising research area. *Public Organization Review*, 7(3), 221–236. <https://doi.org/10.1007/s11115-007-0033-4>
- Bach, T., & Jann, W. (2010). Animals in the administrative zoo: Organizational change and agency autonomy in Germany. *International Review of Administrative Sciences*, 76(3), 443–468. <https://doi.org/10.1177/0020852310372448>
- Bailey, K. D. (1994). *Typologies and taxonomies. An introduction to classification techniques*. Thousand Oaks, CA: Sage Publications.
- Blau, P. (1962). Managerial control. In P. Blau & R. W. Scott (Eds.), *Formal organizations: A comparative approach* (pp. 165–193). San Francisco, CA: Chandler Publishing Company.
- Blondel, J. (1981). *The organization of governments: A comparative analysis of governmental structures*. London: Sage Publications.
- Böckenförde, E.-W. (1964). *Die Organisationsgewalt im Bereich der Regierung: eine Untersuchung zum Staatsrecht der Bundesrepublik Deutschland*. Berlin: Duncker & Humblot.
- Brans, M., Pelgrims, C., & Hoet, D. (2006). Comparative observations on tensions between professional policy advice and political control in the low countries. *International Review of Administrative Science*, 72(1), 57–71.
- Chen, S., Christensen, T., & Ma, L. (2019). Competing for Father's Love? The politics of central government agency termination in China. *Governance*. <https://doi.org/10.1111/gove.12405>
- Christensen, J. G. (1997). Interpreting administrative change: Bureaucratic self-interest and institutional inheritance in government. *Governance*, 10(2), 143–174. <https://doi.org/10.1111/0952-1895.351997035>
- Christensen, T., & Lægreid, P. (2005). *New public management: The transformation of ideas and practice*. Aldershot: Ashgate.
- Christensen, T., & Lægreid, P. (2007). The whole-of-government approach to public sector reform. *Public Administration Review*, 67(6), 1059–1066.
- Christensen, T., & Lægreid, P. (2009). Living in the past? Change and continuity in the Norwegian Central Civil Service. *Public Administration Review*, 69(5), 951–961.
- Christensen, T., & Lægreid, P. (2010). Complexity and hybrid public administration - Theoretical and empirical challenges. *Public Organization Review*, 11(4), 407–423. <https://doi.org/10.1007/s11115-010-0141-4>
- Collier, D., LaPorte, J., & Seawright, J. (2012). Putting typologies to work: Concept formation, measurement, and analytic rigor. *Political Research Quarterly*, 65(1), 217–232. <https://doi.org/10.1177/1065912912437162>
- Creswell, J. W., & Clark, V. L. P. (2011). *Designing and conducting mixed methods research* (2nd ed.). Los Angeles, CA: SAGE.
- Delhaes, D., & Kersting, S. (2015, May 4). Bund setzt auf eigene BER-Kontrolleure. *Handelsblatt*. Retrieved from <https://www.handelsblatt.com>
- Derlien, H.-U. (1996). Zur Logik und Politik des Ressortzuschnitts. *Verwaltungsarchiv*, 87, 548–580.
- Derlien, H.-U. (2005). German public administration: Weberian despite “modernization”. In K. K. Tummala (Ed.), *Comparative bureaucratic systems*. Lanham, MD: Lexington Books.

- Döhler, M. (2007). Vom Amt zur Agentur? Organisationsvielfalt, Anpassungsdruck und institutionelle Wandlungsprozesse im deutschen Verwaltungsmodell. In W. Jann & M. Döhler (Eds.), *Agencies in Westeuropa* (pp. 12–47). Wiesbaden: VS Verlag für Sozialwissenschaften.
- Döhler, M. (2015). The bias of structures: How multidivisional organizations work in the public sector. *Public Organization Review*, 17(1), 83–100. <https://doi.org/10.1007/s11115-015-0329-8>
- Egeberg, M. (1999). The impact of bureaucratic structure on policy-making. *Public Administration*, 77(1), 155–170.
- Egeberg, M. (2012). How bureaucratic structure matters. In B. G. Peters & J. Pierre (Eds.), *The SAGE handbook of public administration* (pp. 157–168). Los Angeles et al: Sage.
- Englich, B., & Fisch, R. (2002). Projektgruppen in der öffentlichen Verwaltung. Aktuelle Verbreitung, Chancen, Modernisierungsaspekte. In *Speyerer Forschungsberichte* (p. 198). Speyer: Forschungsinstitut für Öffentliche Verwaltung, Hochschule für Verwaltungswissenschaften Speyer.
- Federal Ministry of the Interior (2011, September 1). Gemeinsame Geschäftsordnung der Bundesministerien (GGO).
- Flyvbjerg, B. (2006). Five misunderstandings of case-study research. *Qualitative Inquiry*, 12(2), 219–245.
- Gualmini, E. (2007). Restructuring Weberian bureaucracy: Comparing managerial reforms in Europe and the United States. *Public Administration*, 86(1), 75–94.
- Gualmini, E. (2008). Restructuring Weberian bureaucracy: Comparing managerial reforms in Europe and the United States. *Public Administration*, 86(1), 75–94. <https://doi.org/10.1111/j.1467-9299.2007.00691.x>
- Gulick, L. (1937). Notes on the theory of organization. In L. Gulick & L. Urwick (Eds.), *Papers on the science of organization*. New York: Institute of Public Administration, Columbia University.
- Hood, C. (1979). The machinery of government problem. In *Studies in public policy* (28). Glasgow: University of Strathclyde.
- Hood, C. (1991). A public management for all seasons? *Public Administration*, 69(1), 3–19.
- Hood, C., & Dunsire, A. (1981). *Bureaumerics, the quantitative comparison of British Central Government agencies*. Tuscaloosa, AL: University of Alabama Press.
- Hustedt, T. (2013). *Ministerialverwaltung im Wandel: Struktur und Rolle der Leitungsbereiche im deutsch-dänischen Vergleich*. Baden-Baden: Nomos.
- Hustedt, T. (2018). Germany: the smooth and silent emergence of advisory roles. In R. Shaw & C. Eichbaum (Eds.), *Ministers, minders and mandarins. An international study of relationships at the executive summit of parliamentary democracies* (pp. 72–90). Cheltenham: Edward Elgar Publishing.
- International Journal of Public Administration (2012). Mapping public sector organizations. 35(12).
- Jann, W. (2003). State, administration and governance in Germany: Competing traditions and dominant narratives. *Public Administration*, 81(1), 95–118.
- König, K. (2015). *Operative Regierung*. Tübingen: Mohr Siebeck.
- Kuipers, S., Yesilkagit, K., & Carroll, B. (2017). Coming to terms with termination of public organizations. *Public Organization Review*, 18(2), 263–278. <https://doi.org/10.1007/s11115-017-0376-4>
- Laux, E. (1971). Nicht-hierarchische Organisationsformen in Ministerien. In *Aktuelle Probleme der Ministerialorganisation. Schriftenreihe der Hochschule Speyer* (48). Berlin: Duncker & Humblot.
- MacCarthaigh, M., & Roness, P. G. (2012). Analyzing longitudinal continuity and change in public sector organizations. *International Journal of Public Administration*, 35(12), 773–782. <https://doi.org/10.1080/01900692.2012.715567>
- MacCarthaigh, M., Roness, P. G., & Sarapuu, K. (2012). Mapping public sector organizations: An agenda for future research. *International Journal of Public Administration*, 35(12), 844–851. <https://doi.org/10.1080/01900692.2012.715568>
- Mätzke, M. (2010). The organization of health policy functions in the German Federal Government. *Social Policy & Administration*, 44(2), 120–141.
- Mayntz, R., & Scharpf, F. W. (1975). *Policy-making in the German Federal bureaucracy*. Amsterdam, Oxford, New York: Elsevier.
- Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83(2), 340–363.
- Mintzberg, H. (1979). *The structure of organisations*. Upper Saddle River, NJ: Prentice Hall.

- Mortensen, P. B., & Green-Pedersen, C. (2014). Institutional effects of changes in political attention: Explaining organizational changes in the top bureaucracy. *Journal of Public Administration Research and Theory*, 25(1), 165–189. <https://doi.org/10.1093/jopart/muu030>
- Müller, E. (1986). *Innenwelt der Umweltpolitik: Sozialliberale Umweltpolitik - (Ohn)macht durch Organisation?* Opladen: Westdeutscher Verlag.
- Peters, B. G. (2001). *The politics of bureaucracy* (5th ed.). New York: Routledge.
- Pfeffer, J., & Salancik, G. R. (2003). *The external control of organisations: A resource dependence perspective*. Stanford, CA: Stanford University Press.
- Pollitt, C. (2003). Joined-Up government: A survey. *Political Studies Review*, 1(1), 34–49.
- Pollitt, C. (2013). 40 years of public management reform in UK central government - Promises, promises. *Policy & Politics*, 41(4), 465–480. <https://doi.org/10.1332/030557312X655710>
- Pollitt, C., & Bouckaert, G. (2017). *Public management reform: A comparative analysis - into the age of austerity* (4th ed.). New York: Oxford University Press.
- Pressman, J. L., & Wildavsky, A. (1973). *Implementation*. Berkeley, LA: University of California Press.
- Rolland, V. W., & Ågotnes, J.-E. (2003). *A Database on the Organisation of the Norwegian State Administration (NSA) 1947–2003*. Paper presented at the Bergen Seminar on Organizational Forms, Autonomy and Control in the Public Sector, Bergen, Norway.
- Rolland, V. W., & Roness, P. G. (2010). Mapping organizational units in the state: Challenges and classifications. *International Journal of Public Administration*, 33(10), 463–473. <https://doi.org/10.1080/01900692.2010.497321>
- Sartori, G. (1975). The tower of Babel. In G. Sartori, F. Riggs, & F. Teune (Eds.), *Tower of Babel: On the definition and analysis of concepts in the social sciences* (pp. 7–38). Pittsburgh: International Studies Association.
- Schröter, E. (2007). Reforming the machinery of government: The case of the German Federal bureaucracy. In R. Koch & J. Dixon (Eds.), *Public governance and leadership* (pp. 251–271). Wiesbaden: Deutscher Universitätsverlag.
- Scott, W. R. (1981). *Organizations: rational, natural, and open systems*. Englewood Cliffs, NJ: Prentice-Hall.
- Scott, W. R., & Davis, G. F. (2016). *Organizations and organizing: Rational, natural, and open system perspectives*. New York: Routledge.
- Sieberer, U. (2015). Die Politik des Ressortzuschnitts zwischen Koalitionsarithmetik und thematischer Profilierung. Eine koalitionspolitische Erklärung für Kompetenzänderungen der Bundesministerien, 1957–2013. *Politische Vierteljahresschrift*, 56(1), 77–103.
- Simon, H. A. (1997). *Administrative behaviour: A study of decision-making processes in administrative organizations* (4th ed.). New York: The Free Press.
- Tolbert, P. S., & Hall, R. H. (2009). *Organizations: Structures, processes, and outcomes*. Upper Saddle River, NJ: Pearson/Prentice Hall.
- Van Thiel, S. (2012). Comparing agencies across countries. In K. Verhoest, S. Van Thiel, G. Bouckaert, & P. Lægreid (Eds.), *Government agencies - Practices and lessons from 30 countries* (pp. 18–26). UK: Palgrave Macmillan.
- Weber, M. (2010). *Wirtschafts und Gesellschaft: Grundriss der verstehenden Soziologie*. Frankfurt: Zweitausendeins.
- Wettenhall, R. (2016). Portfolios, departments and agencies: Tinkering with the machinery-of-government map. *Australasian Parliamentary Review*, 31(1), 98–116.
- Wilson, J. Q. (1989). *Bureaucracy: What government agencies do and why they do it*. New York: Basic Books.
- Wynen, J., Verhoest, K., & Kleizen, B. (2016). More reforms, less innovation? The impact of structural reform histories on innovation-oriented cultures in public organizations. *Public Management Review*, 1–23. <https://doi.org/10.1080/14719037.2016.1266021>

How to cite this article: Bertels J, Schulze-Gabrechten L. Mapping the black box of intraministerial organization: An analytical approach to explore structural diversity below the portfolio level. *Governance*. 2021;34:171–189. <https://doi.org/10.1111/gove.12486>