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What Drives Successful Administrative Performance during Crises? Lessons from Refugee Migration and the Covid-19 Pandemic

COVID-19 Viewpoint

Abstract: *The Covid-19 pandemic affects societies worldwide, challenging not only health sectors but also public administration systems in general. Understanding why public administrations perform well in the current situation— and in times of crisis more generally—is theoretically of great importance, and identifying concrete factors driving successful administrative performance under today's extraordinary circumstances could still improve current crisis responses. This article studies patterns of sound administrative performance with a focus on networks and knowledge management within and between crises. Subsequently, it draws on empirical evidence from two recent public administration surveys conducted in Germany in order to test derived hypotheses. The results of tests for group differences and regression analyses demonstrate that administrations that were structurally prepared, learned during preceding crises, and displayed a high quality in their network cooperation with other administrations and with the civil society, on average, performed significantly better in the respective crises.*

Evidence for Practice

- While practitioners often prefer centralized and hierarchical solutions in times of crisis, this study highlights the potential of reflexive and adaptive use of multiactor networks to cope with the extraordinary.
- Administrations that are prepared and that display a high quality in their network cooperation with other administrations and with civil society, on average, performed significantly better in their respective crises.
- Knowledge management and resource sharing—both among administrative units and with civil society— increase organizational ability to perform well in crisis situations.
- Administrations do best when lessons learned in crises are accessibly stored and when previously successful crisis networks can be quickly revitalized, thus allowing for intercrisis learning—documentation of best practices during crises—via smart or traditional forms of data storing and organizational memory keeping— further boost the performance of administrations during succeeding crises.
- In the early stages of a crisis, decision makers need to invest in organizational self-awareness of how challenges are mastered and how insights about optimal coping are best passed on.

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The Covid-19 pandemic challenges not only the health sectors in countries worldwide but also their public administration systems. Executing the necessary actions to ensure public health, such as tracking infections or organizing local health care, takes focus and binds capacities. Furthermore, implementing a lockdown means more tasks and responsibilities for local administrations: distributing aid for the local economy, enforcing the compliance of citizens and businesses with new rules and restrictions, and last but not least, reorganizing internal routines and procedures as services turn digital. Thus, local administrations' capacity to cope with Covid-19 is crucially relevant for the effectiveness of the overall national antivirus strategy.

Notwithstanding the dramatic societal impact of a pandemic, from an administrative science perspective, the current situation is less exceptional than one might think. Technically speaking, administrations have had to deal intermittently with crises of different types over the last decades—and research on how administrations learn from such crises is growing (Boin and Lodge 2016; Kettl 2006; Lalonde 2007). The main questions are *which factors drive successful organizational performance in times of crisis and which factors make public administration systems more resilient when facing extraordinary challenges.*

Addressing these questions, this article proceeds as follows. Arguments about potential drivers of administrative performance in times of crisis are discussed. Based on that review, we develop and subsequently test a model of drivers of successful performance in times of crisis, thereby testing hypotheses related to intracrisis and intercrisis

learning and adaption (Moynihan 2008, 2009). The results from regression analyses and tests for group differences demonstrate that an administration's quality of networking, level of structural preparedness, and ability to draw on lessons learned during preceding crises matter most for successful administrative performance in crisis situations because those administrations that had these factors in place performed significantly better in the respective crises.

Literature Review

The Covid-19 crisis constitutes a textbook example of a "wicked" or "nonroutine" problem for governments and administrations (Kettl 2005, 2006). Such nonroutine problems are said to occur with ever greater frequency and are "characterized by high consequentiality, limited time, high political salience, uncertainty, and ambiguity" (Moynihan 2008, 351). Such wicked problem crises are studied, inter alia, by focusing on organizational change and bureaucratic behavior (Peters, Pierre, and Randma-Liiv 2011; Simon 1947). Research questions often revolve around dichotomies informed by innovation and network theories that frame administrative crisis responses as based either on status quo behavior or on innovations that induce disruptive adjustments in procedures and structures. Further dichotomies present actor interaction as pursued in a hierarchical, top-down manner or through collaboration in decentralized and horizontal networks, and consider whether learning strategies focus exclusively on current conditions or apply a comparative logic.

Tradition versus Innovation

In this context, the question is "whether governments maintain their well-worn paths of governing or whether the crisis becomes the source of change, and perhaps fundamental change, in the patterns of governance" (Peters, Pierre, and Randma-Liiv 2011, 16). This question also applies to how single administrations respond—either by trusting in traditional behavior or by trying new paths, in other words, innovation. Which strategy is better is fiercely debated. On the one hand, it is argued that tradition is more efficient and effective—crises are hardly the most favorable times to ask administrations to change, let alone reinvent procedural routines or engage in outright restructuring and adjustment. Indeed, quite the opposite, "threat rigidity may occur, whereby people respond to new threats in a rigid and inflexible manner, recycling previous responses and known routines for new problems" (Moynihan 2008, 351). On the other hand, extraordinary circumstances can sometimes reveal organizational capacity for transformation, motivating staff to excel and leaders to put turf wars aside, thus facilitating beneficial changes unlikely to be achieved in normal times (Peters, Pierre, and Randma-Liiv 2011, 16).

Hierarchy versus Networks

Since learning and innovation in crises are seen as functions of how the relevant actors interact, the mode of crisis coordination constitutes another central issue of the debate. The main alternatives are either investing in strengthening the center's top-down steering capacity or in developing decentral capacities and intensifying horizontal information exchange. Opposing logics are at work here as "a command and control model, often presented by practitioners, champions a hierarchical approach" while "a coordination and communication model argues that crisis response inevitably depends on collaborative processes to succeed" (Moynihan 2009, 897).

Many studies contend that bundling as well as centralization is, firstly, preferable in terms of the speed and coherence of decisions, and, secondly, almost impossible to avoid given not only the need for strong leadership, but also the likelihood that opportunistic behavior will emerge in times of crisis, prompting administrations "to defend their own 'turf,' and perhaps especially to defend their own budgets" (Peters, Pierre, and Randma-Liiv 2011, 16).

However, the greater the complexity of a wicked problem, the more pronounced are the doubts that fostering hierarchy constitutes the optimal crisis response, as the center risks becoming overwhelmed. In such situations, networks reveal their strengths. They provide agile horizontal cooperation by referring "to structures involving multiple nodes—agencies and organizations—with multiple linkages, ordinarily working on cross-boundary collaborative activities" (McGuire and Agranoff 2011, 266). Indeed, networks are based on the principle of managing complex issues through decentralized structures in order to adapt more effectively to local circumstances (Agranoff 2008). As such, they perform different, though not mutually exclusive functions, from service delivery and information diffusion to direct problem solving and community capacity building (Milward and Provan 2006). Networks are thus particularly helpful in managing crises as crisis response "requires gaining consensus or, at least, acquiescence across the society and decentralization may be a useful strategy for producing that legitimacy for the proposed changes" (Peters, Pierre, and Randma-Liiv 2011, 18).

Especially under conditions of great uncertainty, when it is far from clear what the best response might be, strategies of decentralization and networking are particularly valuable as they are said to enlarge problem-solving capacity (Edlefsen and Staemmler 2018; Kettl 2006). In that sense, a network strategy that brings together a wide range of authorities, professional organizations, associations, and volunteers hedges the administration against threatening overload (Alford 2009; Bovaird 2007). In sum, what makes networks superior in crisis reaction is their potential to learn and to deviate from beaten paths (Milward and Provan 2006; Moynihan 2008, 351; Torfing 2016).

Situational versus Comparative Learning

Innovation and learning are intimately linked concepts. Innovation implies that established structures and processes that do not function sufficiently in crises are substituted. However, "without learning in advance about how to deal with such threats, we tend to pull old game plans off the shelf to deal with new problems. If all we have are backward-looking plans, we doom ourselves to repeated failure" (Kettl 2006, 277). In other words, organizations need preparation and capacities to learn in order to respond effectively to wicked problem crises. Two issues of knowledge management stand out when it comes to preparedness: how can lessons learned in one situation be stored, and how can such insights be made available when the next crisis breaks out. In other words, how can evidence-based situational learning be transformed into learning comparatively across cases? (Hartley, Sørensen, and Torfing 2013; Lalonde 2007; Neustadt and May 1986). In this respect, documentation is of utmost importance. Preserving knowledge of failures, successes, and instrument effectivity is a necessary condition for learning. How exactly an administration draws upon and applies insights gleaned in previous crisis situations may differ

and remains an empirical question. However, without storing and documenting past experiences, preparedness probabilities go down. Our considerations about the complementary of the two styles of learning—i.e., focusing on one situation or accumulating and adapting strategies over time—are linked to the concept of "intracrisis learning" and "intercrisis learning" developed by Donald Moynihan (2008, 2009). Accordingly, intracrisis learning implies the direct reflection and adoption of new processes or adjustments regarding structures and actors whenever traditional schemes can no longer be usefully applied, while intercrisis learning includes drawing lessons from the past, in particular former crises, and adapting existing strategies to the needs of specific units or departments.

Each of the dichotomies discussed above—traditional versus innovation, hierarchy versus networks, situational versus comparative learning—is a crude and necessarily selective simplification. Together, they are neither exhaustive nor even mutually exclusive. Nonetheless, they provide a useful analytic framework, specifically positing that, when faced with wicked problems, administrations that respond with innovative solutions, intensifying networks, and intracrisis as well as intercrisis learning capacities work better than administrations that rely on traditional, top-down approaches only. As such, the succeeding empirical analysis is guided by the following hypotheses:

- *Intracrisis learning*: Administrations that within a crisis enlarge and in particular deepen networks of different types (in terms of intense and good cooperation) with actors from the civil society, other administrative units, or private enterprises, and document measures undertaken, exhibit high levels of administrative performance.
- *Intercrisis learning*: Administrations that within a crisis take stock of existing structures, in particular networks with stakeholders that were created in former crises, exhibit high levels of administrative performance.

Data and Methods
Data
The empirical part of the study is based on the analysis of data from two original online surveys, conducted in Germany in 2019 and 2020, using the software Unipark. Both questionnaires tap into local administrators' work environment, intraorganizational structural change in the context of the respective "crisis," networking activities, knowledge storage and management, as well as the sociodemographic details of the municipality.

The first survey was conducted in the aftermath of the increased refugee migration ("refugee crisis") in summer 2015. It went to German integration officers as well as immigration and social authorities in the area of asylum in all major German cities with over 100,000 inhabitants; additionally, all municipalities with the initial letters D, E, H, K, N, R, and S in all federal states were included in the sample, as were all administrators and mayors of Germany's districts. The survey was conducted between July and November 2019. Overall, 2,998 respondents were invited, of whom 750 participated, equaling a response rate of 25 percent.

The second survey taps into the effects of the Covid-19 pandemic that hit the local level early in 2020. All German health authorities, district administrators, and mayors were contacted as well as all

municipalities that begin with the initial letter M. Between April and May 2020, from 1,700 municipalities, 354 took part, equaling a response rate of about 21 percent.[1]

Estimation Model
Aiming to detect the impact of different influencing factors on administrative performance, generalized linear estimation models (GLM) were applied. A direct interpretation of the coefficient is not possible in such nonlinear models; therefore, the coefficient Exp (b) can be understood as an "odd ratio" (or "effect size") and specifies the factor by which the probability ratio changes if the predictor is increased by one unit. Hence, if Exp (b) > 1, the respective indicator has a positive effect on the dependent variable; if Exp (b) < 1, the respective indicator has a negative effect.[2]

Dependent Variable. Different measures were used to specify the "performance of the PA" in response to challenges posed by the respective crises, all information for constructing the variables stems from our surveys.[3] For both studies, we constructed indicators as delineated in detail below from the following questions, providing a 1–5 Likert scale for the answers (from very good (5) to very little (1)):

(a) "In your opinion, to what extent does the reaction related to the management of migration and flight (or: related to the management of the current Covid-19 pandemic) demonstrate the efficiency and innovative capacities of the local government?"

(b) "All in all, how effectively do you think your administration copes with the challenges of the migration flows (or: the current pandemic)?"

Using the answers to questions (a) and (b), we constructed an index, ranging from 2–10, that indicates low to high performance levels. Based on this index, we created the following dummy variables: "Performance of PA," which is equal to 1 when the value of the index is equal to or higher than 8, and 0 otherwise; "Performance of PA High," that is equal to 1 once the value of the index is equal to or higher than 9; and 0 otherwise "Effectiveness," which is equal to 1 when question (b) is answered with "very effectively" or "effectively," and 0 otherwise.

Independent Variables. As for the independent variables, different dummies were created from survey answers to capture the measures undertaken by the public administrations in the context of the respective crisis.

Cooperation and networks (used in both samples). For the indicators "Quality of Network Civil Society" and "Quality of Network Administration," the respective dummy equals 1 when the question "*Did the interaction with the civil society/other administrative units work well*" is answered with "fully agree" or "agree," and 0 otherwise.

For the indicators "Intensification Network Civil Society" and "Intensification of Network Administration," the respective dummy equals 1 when the network was intensified in the respective crisis, and 0 otherwise.

Preparedness. (a) *Indicators used in the Migration Sample*. For the indicators "Coordination with other administrations ex ante" and "Coordination with Civil Society ex ante," the respective dummy

equals 1 when the respondent indicated that the administration used and revitalized networks with civil society/other administrations created before the "migration crisis," and equals 0 otherwise.

Furthermore, the dummy "Documentation" indicates that within the "refugee crisis," changes and adaptions were documented for future use by other individuals, units, or stakeholders.

(b) *Indicators used in the Covid-19 Sample.* For the indicators "Preparedness Civil Society," "Preparedness Administration," and "Preparedness Private," a respective dummy was created that equals 1 when the respondent indicated that the administration used and revitalized networks with civil society/other administrations that were created in the "migration crisis," and equals 0 otherwise. Furthermore, a dummy "Preparedness Overall" was created that becomes 1 once two or more of the previous dummies turn 1, and becomes 0 otherwise.

Results and Discussion
Applying different models on our data, we found the following links between the different independent variables and the respective indicator for performance of the PA.

As can be drawn from Table 1, indicators for documentation, for preparedness of the administration thanks to the use of ex ante established networks, and for the quality of cooperation and networking with different actors display significant positive coefficients, indicating a positive influence of these factors on performance in the "refugee crisis".

As for our second sample on administrative performance in the current Covid-19 pandemic, we found the following links.

As can be drawn from Table 2, indicators for the preparedness of the administration due to the use of networks and cooperations

that were installed in the previous "refugee crisis," as well as for the quality of cooperation and networking with different actors, display significant positive coefficients, indicating a positive influence of these factors on performance in the Covid-19 pandemic.

Additionally, we used a nonparametric Mann–Whitney U test to detect group differences in the data set for Covid-19 (see Table A1 in the appendix). As the grouping variables, we used the three dummies for administrative performance. We found significant evidence of group differences, substantiating our findings that administrations that were prepared and that displayed a high quality in their network cooperation with other administrations and with civil society, on average, performed significantly better in their respective crises.

Interpreting the results against the backdrop of the theoretical discussion, we conclude that both *intracrisis and intercrisis learning* are relevant to achieve or maintain a good performance in times of crisis and that the two concepts complement each other to a certain extent.

First, *intracrisis learning* in terms of documentation of helpful practices for use within a crisis as well as cooperation and networking with stakeholders increases performance. Other indicators (not displayed) that account for the sheer enlargement of networks intracrisis remain insignificant in all models for the "refugee crisis" as well as the Covid-19 pandemic. In other words, the quality of cooperation matters. For both crises, "good" and intense cooperation with other administrations and actors from civil society intracrisis has a significant positive effect on the overall performance of the PA.[4] Hence, general tensions between efficiency and networking cannot be identified. This result confirms previous empirical findings (e.g., McGuire and Agranoff 2011) suggesting that operational networks outrank hierarchical solutions in terms of performance. This would justify network-related (transaction)

Table 1 Drivers of Performance of PA—Results for the Refugee Crisis

Variable	i	ii	iii	iv	v
	Performance of PA		Effectiveness	Performance of PA High	
Intercept	1,617 (.0893)***	1,207 (.1070)*	1,192 (0.2608)	0.055 (.6062)***	0.382 (.2318)***
Coordination with other administrations ex ante	1,806 (.2413)**	1,621 (.2466)**			0.594 (0.3869)
Coordination with civil society ex ante	1,171 (0.297)	1,064 (0.2654)			1,835 (0.3773)*
Documentation		2,338 (0.1736)***	1,821 (0.2608)***	1,630 (0.2985)*	1,920 (0.2862)**
Quality coordination with civil society			1,786 (0.2768)**	2,355 (0.4674)*	
Quality coordination with administration			1,951 (0.2610)***	4,977 (0.4377)***	
N	682	678	409	227	227

Notes: Significance level: ***1%, **5%, *10%, standard error in parentheses.
Source: Authors' calculations.

Table 2 Drivers of Performance of PA—Results for the Covid-19 Pandemic

Variable	i	ii	ii	iv	v
	Performance of PA	Effectiveness		Performance of PA High	
Intercept	1,571 (0.4835)	0.824 (0.9018)		0.471 (0.4287)**	0.125 (0.7500)***
Quality coordination with administration	25,773 (0.8638)***	13,476 (0.8091)***			12,121 (0.7828)***
Quality coordination with civil society		1,121 (0.4800)			
Preparedness overall		2,688 (0.5097)**	2,108 (0.4800)*		
Preparedness civil society				2,922 (0.4876)**	
N	101	101	101	101	101

Notes: Significance level ***1%, **5%, *10%, standard error in parentheses.
Source: Authors' calculations.

costs for the public sector (Agranoff 2006), because the stability and quality of networks bring greater effectiveness (Moynihan 2009; Provan and Kenis 2008).

Second, *intercrisis learning* resulting in preparedness matters. In the case of the "refugee crisis," a significant positive effect on performance of the administration can be detected if networks with civil society and other administrations that were extended and intensified *before* the crisis could be revitalized. For the Covid-19 pandemic, indicators that denote that the respective networks—with civil society, other administrative units, and the private sector—were built ex ante in the "refugee crisis" and revitalized in the pandemic, reveal a significant positive effect on performance of the administration during the pandemic. Hence, when faced with a new crisis, learning from previous experiences and events helps by augmenting administrative performance (Kettl 2006; Moynihan 2008).

Conclusion

This paper answers the call by Boin and Lodge (2016) for public administration scholars to focus on the management of crises, especially regarding the collaboration with nonstate actors. Evidence from refugee migration to Germany in 2015 as well as from the ongoing Covid-19 pandemic suggests that networks are indeed crucial for the successful performance of local public administration in times of crisis. While the concrete meaning of "successful performance" depends on the respective type of administration (and may have a very different signification for a local health authority in the Covid-19 pandemic compared to an immigration registration office in the context of refugee migration), the study identifies drivers of administrative performance more abstractly. In addition to relying extensively on networks, these drivers are documentation of best practices and the ability to revitalize structures and insights derived from former crises. Additionally, we found significant evidence of group differences, substantiating our findings that administrations that were prepared and that displayed a high quality in their network cooperation, on average, performed significantly better in the respective crises. In short, successful performance probabilities rise with the ability to make good use of previous experience. Intracrisis and intercrisis learning are thus intimately connected, the former being a prerequisite of the latter.

The results of this study suggest further avenues for research. First, the potential of reflexive and adaptive use of multiactor networks to cope with extraordinary circumstances should be further explored and empirically tested. Second, as successful performance in crisis situations seems to depend upon the sharing of knowledge and the ability to coordinate the public and private divide, investigating the conditions of communication and collaboration across domains should remain central to scholars of public management—especially if they are interested in understanding how crises are overcome organizationally. Third, given that one of the very reasons for bureaucracies to emerge was their superior ability to provide accessible memory as the basis to make decisions, it is probably time to revisit this memory function with a view to appropriately translating it to the digital age. This would help to improve our understanding of how lessons already learned are stored and kept accessible to inform subsequent emergency responses. Investing in the organizational capacity to benefit from lessons already learned is likely

to pay out. What do these findings mean for those in the crisis now and for the future? Improving networking could help organizational responses to the current Covid-19 crisis; improving organizational memory and learning could help responses to crises as yet unknown.

Notes

1. Depending on the concrete answers given (e.g., if specific networks were revitalized in the respective crisis), not all cases from the respective survey could be included in the estimation models. This fact explains the generally lower number of cases considered in the estimation models, compared to the overall sample size. Furthermore, the selection logic—addressing fewer administrations, focusing on health authorities being addressed in the middle of a health crisis—accounts for the overall lower number of cases in the second survey.

2. While only the results of the logit model that exhibit a high fit of the model are displayed, as a robustness check, we also tested probit models for all specifications.

3. The dependent variable is based on self-reported perception data—the answer is not a neutrally observable number or measure, but an own assessment or the perception about the performance of the administration in the respective crisis as reported by the respondent. Self-reported and perception data may suffer from specific disadvantages, as answers may be exaggerated, respondents may be too embarrassed to reveal details of more personal nature, or biases toward social desirability or overestimation of results due to missing neutral information may occur. Nonetheless, these effects tend to be most problematic when it comes to personal sentiments or achievements, but less so when organizational performance can be relatively precisely judged by individuals from within the organization. Biases are less likely in these cases as no personal information is asked for and the focus is not on personal performance. For our study, one can assume that internal validity is given as, first, the "cause" precedes the "effect" in time, and second, the "cause" and the "effect" tend to occur together, and lastly, because there are no scientifically justifiable alternative explanations for the observed covariation. External validity can be seen as given as applying the conclusions outside the context of this specific study is possible.

4. As for cooperation with civil society, the effect is also positive, but not significant in all models. Nonetheless, as the effect size and strength are as expected, the most likely reason for the missing significance is a methodological problem, rooted in the relatively small *n* tested.

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Appendix

Table A1 Group Differences Covid-19 Pandemic

	Effectiveness	Performance of PA	Performance of PA High
Grouping variable: Preparedness			
Mann–Whitney U	11,576,000	11,218,500	11,695,500
Wilcoxon W	34,154,000	36,194,500	36,671,500
Z	−3,449	−4,513	−3,635
Asymp. Sig. (2-tailed)	.001***	.000***	.000***
Grouping variable: Quality coordination with administration			
Mann–Whitney U	7,606,500	6,885,000	8,629,500
Wilcoxon W	13,601,500	12,880,000	14,624,500
Z	−8,300	−8,914	−5,698
Asymp. Sig. (2-tailed)	.000***	.000***	.000***
Grouping variable: Quality coordination with civil society			
Mann–Whitney U	10,464,500	10,898,000	11,682,500
Wilcoxon W	21,639,500	22,073,000	22,857,500
Z	−5,995	−5,016	−3,548
Asymp. Sig. (2-tailed)	.000***	.000***	.000***

Notes: Significance level ***1%, **5%, *10%.
Source: Authors' calculations.