

REFLEXIVE GOVERNANCE FOR A RESILIENT URBAN CRISIS RECOVERY?

A Multiple Case Study on the Barriers and Boosts for Reflexive
Governance in The Hague and Rotterdam During the Corona Crisis

Aurelia Schwarz

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Erasmus University Rotterdam (ESSB & IHS)

Supervisor: Dr. Jan Fransen Second Reader: Prof. dr. Jurian Edelenbos

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*If I had only one hour to save the world,
I would spend the fifty-five minutes
defining the problem,
and only five minutes finding the solution.*

-

Albert Einstein (attributed)

Abstract

The COVID-19 has strained urban resilience on multiple levels. Yet, the crisis is argued to present an opportunity for enhancing cities' resilience through transformative solutions while recovering from the current crisis. The Hague and Rotterdam are the only Dutch cities joining the Resilient Cities. Thereby, the two cities have committed to becoming more future-proof already before the pandemic by means of dedicated resilience teams and urban resilience strategies. The international network supports knowledge exchange between cities seeking to integrate resilience principles in COVID-19 recovery. The mechanisms of reflexive governance are arguably key to translating lessons learned from the crisis into transformative strategies, that address the corona crisis and other urban challenges in integrated ways.

Reflexive governance is a self-critical, learning-oriented and participatory mode of governance that recognizes its own dynamics as part of the problem structure. This multiple case study fills the gap in empirical contributions on reflexive governance. It is the first study to embed reflexive governance in a crisis context and links it with the governance objective of adaptive urban resilience. It investigates how reflexive governance is enabled or restrained by an interplay of conditions generated by the corona crisis and the attributes of the governance network, in which it takes place. Accordingly, 18 in-depth interviews with actors related to the governance objective of adaptive urban resilience in Rotterdam and The Hague during the corona crisis were conducted. This qualitative research offers a unique perspective by including representatives of the resilience programs, policy-science interfaces, different departments of the municipalities, and NGOs in the sample. The results show how conditions generated by the corona crisis like the sense of urgency, increased problem complexity, and a window of opportunity for change and transformation boost reflexive governance. Also, specific attributes of the governance network have been identified as conducive of reflexive governance during the corona crisis.

These encompass existing local and international networks for knowledge exchange, trust between actors from different knowledge and practice backgrounds, and boundary-spanners. At the same time, findings point to challenges to leveraging lessons learned from the crisis into recovery and resilience strategies with long-term orientation. These are, namely, the municipalities' overarching resource focus on the immediate crisis response and short to medium-recovery measures, the departmentalized organizational structures of the municipalities in which the resilience programs are integrated, and the electoral cycles of local politics. Based on these insights, several practical recommendations are formulated. In brief, they encompass investing in diverse infrastructures for knowledge exchange, including boundary-spanning individuals, involving community actors in recovery planning to contextualize knowledge and match solutions with the local urban context, fostering networks across municipal departments around the boundary-object of urban resilience, and creating governance incentives for aligning crisis response, recovery, and adjacent transformation.

KEYWORDS: reflexive governance, adaptive urban resilience, COVID-19, governance networks, resilient cities network, Resilient Rotterdam, Resilient The Hague

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Contents

1. Introduction	6
1.1 Background of the Research and Research Problem.....	6
1.2 Case Studies	7
1.3 Research Objective and Research Questions.....	7
1.3.1 Theoretical Sub-Questions.....	8
1.3.2 Empirical Sub-Questions	8
1.4 Relevance	8
1.4.1 Societal Relevance	9
1.4.2 Scientific Relevance.....	9
1.5 Research Outline.....	10
2. Theoretical Framework.....	12
2.1. Thematical context: Adaptive Urban Resilience.....	12
2.1.1 Urban Resilience: A contested Concept and Urban Agenda.....	12
2.1.2 The Notion of Adaptive Resilience and Building Back Better from the Corona Crisis	13
2.2. Reflexive Governance	14
2.2.1 Defining Reflexive Governance	14
2.2.2 Reflexive Governance for Enhancing Adaptive Resilience.....	16
2.3. The Governance Network	17
2.4 The Crisis as a Condition for Governance	20
2.5 Influence of Crisis and Governance Network Factors on Reflexive Governance.....	22
2.6 Conceptual Framework.....	23
3. Methodology.....	27
3.1 Research Design.....	27
3.1.1 Multiple Case Study Design.....	27
3.1.2 Case Study Selection	27
3.2 Data Collection	28
3.2.1 Qualitative Interviews	28
3.2.2 Interview Respondents	29
3.2.3 Documents	31
3.3 Data Analysis.....	31
3.4 Operationalization	31
3.4.1 Independent Variable 1: Governance Network Attributes.....	32

3.4.2 Independent Variable 2: Crisis-specific Conditions.....	33
3.4.3 Dependent Variable: Reflexive Governance.....	34
3.5 Limitations of Methodology.....	35
4. Results and Analysis.....	37
4.1. The Case Studies: Empirical Insights.....	37
4.1.2 Enhancing Adaptive Resilience during the Corona Crisis in Rotterdam.....	37
4.1.2 Enhancing Adaptive Resilience during the Corona Crisis in The Hague.....	40
4.2 The Case Studies as Exemplars of Reflexive Governance?.....	41
4.3 The Influence of Crisis Conditions on Reflexive Governance.....	43
4.3.1 The Complexity and Scale of the Corona Crisis as Boost for Reflexive Governance.....	43
4.3.2 The Sense of Urgency as Boost for Reflexive Governance.....	44
4.3.3 Resilience Programs' Focus on Long-Term Recovery and Transformation as Boost for Reflexive Governance.....	45
4.3.4 Municipalities' Resource Focus on Crisis Management and Short-Term Recovery as Barrier for Reflexive Governance.....	46
4.4 The Influence of Governance Network Factors on Reflexive Governance.....	48
4.4.1 Existing Networks as Boosts for Reflexive Governance.....	48
4.4.2 Trust between Actors as Boost for Reflexive Governance.....	50
4.4.3 Connecting Actors as Boost for Reflexive Governance.....	51
4.4.4 Political Cycles and Agendas as Barrier to Reflexive Governance.....	52
4.4.5 Organizational Culture as Barrier to Reflexive Governance.....	53
4.5 Visualizing the Findings.....	54
4.6. Cross-Case Analysis.....	55
4.7 Visualizing the Findings: The Interplay of Factors.....	57
5. Theoretical Reflections.....	59
5.1 Linking Reflexive Governance and Adaptive Urban Resilience.....	59
5.2 The Relationship between Crisis Conditions, Governance Network Attributes, and Reflexive Governance.....	60
5.3 Enriched Conceptual Model.....	62
6. Conclusion.....	65
6.1 Conclusion.....	65
6.2 Implications for Theory.....	66
6.3 Limitations and Recommendations for Future Research.....	67
6.4 Practical Recommendations.....	68

References	70
Appendix A: Interview Guides.....	78
Appendix B: Overview of Respondents.....	83
Appendix C: Information Sheets for Participants	84
Appendix D: Overview of Codes and Code Groups.....	85

List of Tables

Table 1 List of Respondents	30
Table 2 List of Documents.....	31
Table 3 Operationalization Governance Network Attributes	32
Table 4 Operationalization Crisis Conditions	33
Table 5 Operationalization Reflexive Governance.....	34

List of Figures

Figure 1 Conceptual Model.....	25
Figure 2 Visualization of Empirical Findings.....	54
Figure 3 Visualization of Empirical Findings: The Interplay of Factors	57
Figure 4 Enriched Conceptual Model.....	63

1. Introduction

1.1 Background of the Research and Research Problem

Urban resilience has become a buzzword in academia and urban policy practice (Croese et al., 2020). It has become an organizing principle that frames political and scientific discourses on cities (Sharifi, & Yagamata, 2018). The COVID-19 pandemic has bestowed the concept of urban resilience - otherwise most prominently associated with climate change adaptation - new meaning and relevance. It is reported how the crisis “has focused the minds of local governments on the need to rebuild resilience in their recovery strategies” (Wray, 2020). As a multi-hazard shock, the pandemic has strained the resilience of urban systems on multiple levels (Meerow et al., 2016). It is argued that while cities make up for the epi-centers of the disease outbreak, they have the potential to grow and re-emerge as hubs for “resilience, energy, and innovation” (UN, 2020).

A resilient crisis recovery is associated with preparing for future crises through transformative solutions amidst recovering from the current shock. Emerging research suggests that the corona crisis offers an exceptional “opportunity for planners and policy-makers to take transformative actions towards creating cities that are more just, resilient, and sustainable” (Sharifi, & Khavarian-Garmsir, 2020: 1). Holistic recovery planning arguably needs to be proactive and reflective (Resilient Cities Network, 2020).

The mechanisms of reflexive governance are key to translating the knowledge gained from the experiences of an evolving crisis like the COVID-19 pandemic into the adaptation and development of plans, processes, and strategies (Ahern, 2011). Reflexive governance is a self-critical and participatory mode of governance that avoids the assumptions of complete knowledge in advance and recognizes its own dynamics as part of the problem structure (Ersoy & Hall, 2020).

Understanding reflexive governance as the very capability to “thrive on and adopt to shocks” (Ferrari, 2020: 3), the question of which conditions hinder or boost it during the corona crisis arises. While building back better requires reflexive governance, it might be under pressure during the corona crisis, when quick-fix solutions are sought and resources are strained (Sharifi & Khavarian-Garmsir, 2020). Accordingly, the corona crisis offers an opportunity to better understand how reflexive governance for urban resilience is enabled or restrained by an interplay of crisis conditions and attributes of the governance network in which it takes place.

1.2 Case Studies

The Hague and Rotterdam have both committed to becoming more future-proof through their membership in the international Resilient Cities Network, founded by the US-based Rockefeller Foundation, already before the pandemic. Rotterdam has been among the first cities to join the program in 2014 and counts as a front-runner in climate change adaptation and striving for urban sustainability (Spaans & Waterhout, 2017). The Hague has entered the network in 2016 (Resilient The Hague, 2019). In 2020, The Hague and Rotterdam joined the platform Cities for a Resilient Recovery, which was set up by the Resilient Cities Network as a response to the need to generate joint learning regarding integrating resilience principles into urban crisis recoveries (Global Resilient Cities Network, 2020a).

The two cities' resilience programs and their efforts to embed resilience into the urban crisis recoveries make up for compelling case studies. The Hague and Rotterdam are the only Dutch cities having placed Chief Resilience Officers, dedicated resilience teams, and urban resilience strategies (Resilient Cities Network, 2020c). While the governance conditions created by the corona crisis can be expected to play out similarly across the two neighboring cities, variation in the governance settings in terms of the constellations of local and international actors and the ways in which knowledge exchange between them relates to public action are expected.

1.3 Research Objective and Research Questions

This master's thesis aims to qualitatively analyze how the interplay of governance network attributes and external conditions created by the corona crisis influences the adoption of reflexive governance for adaptive urban resilience. Consequently, this study focuses on the interplay of two sets of factors: Governance network-related factors on the one hand and crisis-specific factors on the other hand. Thereby, it is aimed to contribute to an understanding of the relationship between governance network and reflexive governance during the corona crisis, as integrated health, economic, and social challenge (Peters, 2021). This will be done by means of two case studies to get a finer-grained understanding of this relationship through variation in the two cities' governance settings. This variation allows for a more nuanced assessment of the governance network's underexplored role in determining reflexivity (Newig et al., 2010). Correspondingly, the central research question is formulated as follows:

“How does the interplay of governance network attributes and crisis-specific conditions influence the adoption of reflexive governance for adaptive urban resilience during the corona crisis in Rotterdam and The Hague?”

Multiple sub-questions do complement the central research question. These will help to answer the central research question on a theoretical and empirical basis. Therefore, the first set of questions will be answered in the theoretical framework of this research. The other questions are answered through the analysis of the empirical data.

1.3.1 Theoretical Sub-Questions

- a) How are reflexive governance, the governance network, and crisis as a condition for governance discussed and defined in the literature?
- b) How is the relationship between governance network, crisis conditions, and reflexive governance discussed in the literature?

1.3.2 Empirical Sub-Questions

- a) How does reflexive governance for adaptive urban resilience take shape in The Hague and Rotterdam during the corona crisis?
- b) How do governance network attributes and crisis-specific factors interact?
- c) How do variations in the governance networks between the two cities explain differences in the reflexive governance processes adopted?

1.4 Relevance

1.4.1 Societal Relevance

The societal relevance of this research becomes clear when considering that learning while still in the corona crisis is vital for reducing the risks of future shocks and enhancing cities' capacity to deal with them if they do occur (Acuto, 2020). The current work of the open and participatory platform Cities for a Resilient Recovery demonstrates the cities' desire to invest in general resilience-building during the recovery phase of the corona crisis and engage in inter-city learning (Resilient Cities Network, 2020a). Very disruptive shocks like the COVID-19 pandemic lay bare structural weaknesses of urban systems

and how these are connected (Resilient Cities Network, 2020b). Followingly, reflexivity is necessary to “build back better” and induce systemic changes where underlying weaknesses have been detected. Only by informing current and future policy decisions through lessons learned can cities use the crisis as an opportunity for transforming system components that hinder or limit current adaptive capacity (UN, 2020; Ribeiro et al., 2020). The corona crisis offers an opportunity to understand better how governance capacities can be enhanced (Peters, 2021). By providing insights into the most important enabling and disabling conditions for reflexive governance during a crisis, the results of this study will be relevant for informing the design of governance arrangements and processes that encourage reflexivity even in moments of major disruption.

1.4.2 Scientific Relevance

This research builds on current publications concerning governance and resilience during the COVID-19 pandemic. Existing research has thus far shed light on the adoption of adaptive and incremental governance approaches dealing with the evolving and uncertain situation of the pandemic on the national (Willi et al., 2020) and city level (Garavaglia et al., 2020). However, current publications deal, to the most part, with the governance of ad hoc crisis management (Janssen & van der Voort, 2020) and how adaptive ways of governing foster systemic resilience to the pandemic and its impacts (Ticlau et al., 2020). Additionally, several contributions provide risk management perspectives on the COVID-19 pandemic recovery (Menoni & Schwarze, 2020) or scenarios for connecting recovery from the crisis to sustainability transitions (Markard & Rosenbloom, 2020; Wells et al., 2020). Still, there is a lack of in-depth empirical research on the governance processes underlying the development of strategies for resilient urban crisis recoveries.

Moreover, the scientific relevance of this study is based on the scarcity of empirical studies on reflexive governance. As Ersoy and Hall (2020) highlight, the literature on reflexive governance is mainly composed of normative and theoretical contributions. The need to investigate the ways in which reflexive governance is influenced by the governance setting has also been pointed out: Feindt and Weiland (2018: 665) argue that employing reflexive governance as an analytical concept requires an investigation of the governance setting and how this influences a normative and cognitive orientation of actors, which allows for collective and critical learning to occur. The authors argue that the relationship between the governance structure and reflexive processes is far from unequivocal. McNutt and Rayner (2018) stress that reflexivity in governance networks is a largely unexplored field because many policy networks engage in un-reflexive policymaking.

Finally, reflexive governance has been first and foremost linked to the governance objective of sustainable development (Feindt & Weiland, 2018; Voß et al., 2006). By embedding research on reflexive governance in the context of striving for adaptive urban resilience during the COVID-19 in Rotterdam and The Hague, this study also responds to the need for a richer understanding of the factors affecting resilience-oriented decision-making on the city level (Therrien et al., 2020). Therefore, this thesis offers a unique and timely perspective on reflexivity during a complex crisis on the urban scale.

1.5 Research Outline

After introducing the research topic, the relevant theoretical concepts will be discussed in the second chapter of this thesis. Thus, the following chapter will critically elaborate on the concept of adaptive urban resilience, which provides the thematic context of this study. Then, the central variables, reflexive governance, the governance network attributes, and the crisis as a condition for governance will be discussed. This will lead up to the conceptual model of this research. Chapter 3 will outline the methodological approach adopted by this thesis; a qualitative study on the enabling and impeding factors of reflexive governance. In chapter 4, the empirical findings will be presented and analyzed. Their relevance and implications will be discussed in light of previous research and theory in chapter 5. Lastly, this thesis will draw final conclusions. It will end with suggestions for further research and practice-oriented recommendations.

2. Theoretical Framework

The theoretical framework discusses the theoretical concepts most relevant to this research. First, this chapter introduces the concept of adaptive urban resilience, which presents the thematical context of this study. Then, reflexive governance is defined and discussed, and linked to the governance objective of adaptive urban resilience. Followingly, the concept of the governance network is elaborated. More specifically, different governance network attributes and their relationships to reflexivity are discussed. Then, the corona crisis as a condition for governance and its link to reflexive governance is reviewed. Subsequently, it is outlined how crisis-specific and network-related factors link to reflexive governance in the existing literature. Finally, the conceptual model of this thesis will be presented and explained.

2.1. Thematical context: Adaptive Urban Resilience

This chapter discusses urban resilience, which provides the thematical context of this research. It is then zoomed in on the concept of adaptive resilience and how that relates to “building back better” from the corona crisis.

2.1.1 Urban Resilience: A contested Concept and Urban Agenda

The world is becoming progressively urbanized. As the 21st century unfolds, more and more people live in cities, increasing the complexity of urban systems and the scale of urban risks. At the same time, rapid urbanization, climate change, globalization, and digitalization render risks ever more uncertain (The Rockefeller Foundation & ARUP, 2014). Amidst these broader developments, the term of urban resilience has become so omnipresent throughout the past two decades that Leitner et al. (2018: 1276) refer to it as “one of the most influential contemporary concepts influencing the thinking and actions of urban policy makers, international finance organizations, NGOs, community groups and activists across the globe.”

The emergence of resilience thinking implies a paradigm shift in both academia and urban governance. Resilience thinking acknowledges that it is not feasible to know or prepare for all possible hazards. Hence, it counts to identify and strengthen those system components that support critical functions regardless of specific risks or threats (Beilin & Wilinkson, 2015; Sharifi & Yagamata, 2018). This concerns the physical elements of a city as well as its social and institutional systems (Meerow et al., 2019).

Whereas resilience is commonly framed as a desirable property of the city and its sub-systems, critics refer to the concept as malleable and ill-defined (Wardekker et al., 2020). Sharifi and Yagamata (2018: 4) argue that “groups with different research and policy interests provide different

interpretations of the resilience concept” to contrive their agendas. Wardekker et al. (2020) highlight that the decisions it takes to translate an abstract concept like urban resilience into local practice are highly political. Therefore, studying urban resilience requires sensitivity to powerful stakeholders’ agendas and how these shape the dominant discourses on urban resilience (Meerow et al., 2016).

Carpenter et al. (2001) have coined the question “resilience of what for what?” to underscore the need to clarify the specific configurations and disturbances of interest. Instead of being concerned with assessing urban resilience as a variable, this study adopts this critical stance by investigating the governance processes underlying the objective of enhancing adaptive resilience during the corona crisis.

2.1.2 The Notion of Adaptive Resilience and Building Back Better from the Corona Crisis

Adaptive resilience is one of the multiple pathways to resilience. It draws attention to the notion of “bouncing forward” in the face of disruption (Therrien et al., 2020). However, restoring or “bouncing back” to an old system equilibrium after a disturbance has become seen as problematic as it may neither be feasible nor desirable (Ansell et al., 2020). Instead, employing an adaptive resilience framework implies embracing disruptions as an impetus for fundamental change. In contrast to more traditional understandings of resilience, this perspective lets go of the objective of maintaining and restoring the status-quo after a disruption in line with the argument that this would lead to stagnation and hinder innovation in the long run (Rotmans, & Loorbach, 2008).

In this regard, the notion of adaptive resilience fits well to the agenda of “building back better” from the COVID-19 crisis. According to Michie (2020: 698), building back better means ensuring that “economic and social arrangements are better placed to be resilient in the face of such crises.” Frequently, building back better is related to overcoming systemic weaknesses exposed and strengthening system components identified as vital for a system’s functioning and responsiveness during the pandemic. Notably, sustainability and social justice make up for focus topics in strategies for resilient COVID-19 recovery on an international scale (Resilient Cities Network, 2020a; 2020b).

Markaard and Rosebloom (2020: 53) argue that responses to the pandemic should not be short-sighted and instead address “multiple overlapping crisis” as an unprecedented amount of governmental resources is mobilized to mitigate economic collapses and restabilize heavily affected industries. According to the Resilient Cities Network, recovery strategies should address equity, health, safety, climate resilience, and inclusion to respond to underlying risks and stresses in integrated ways. Seventy-nine percent of the network’s member cities are reported to regard enhancing social equity “as a top priority for recovery” (Resilient Cities Network, 2020a). The Resilient Cities Network recommends

assessing vulnerabilities and ways to address their root causes by focusing on “deepening learning” (Global Resilient Cities Network, 2020b: 1).

2.2. Reflexive Governance

After defining reflexive governance and discussing its key mechanisms, it is linked to the concept of adaptive urban resilience.

2.2.1 Defining Reflexive Governance

Governance is a complex concept. On the one hand, the concept denotes an analytical framework to study how significant actors coordinate their actions and resources to pursue jointly defined objectives. This analytical approach directs attention beyond the assumptions of central power of political institutions towards distributed control and more diverse actors and coordination mechanisms involved (Blatter, 2012). On the other hand, governance can also present an empirical object of study (Pierre, 2005). As such, governance comprises the “emergence of new actors, rationalities, policies, and strategies for governing society” (Erikson & Larson, 2019:3). Hence, as an empirical phenomenon, governance refers to the complex process of blending interests and enhancing collective goals for the purposeful guiding of society beyond legal frameworks and regulations (Pierre, 2005; Hyden, 2001). Reflexive governance can be understood as a specific model of governance (Ersoy & Hall, 2020). Different governance approaches determine the type of actors and instruments involved (Treib et al., 2007) and depend on the complexity of issues addressed (Pierre, 2005).

Voß et al. (2006) depict reflexive governance as a two-fold concept. On the one hand, it means the increasingly complex condition of governance systems in the modern world, which require governance to be self-confrontational to overcome self-induced problems. On the other hand, and in line with the understanding adopted by this study, reflexive governance denotes a specific strategic orientation that results from this condition. As such, reflexive governance means the self-confrontation of governance through strategic mechanisms that facilitate transition, transformation, and adaptation (Rotmans & Loorbach, 2008). Reflexive governance “understands itself to be part of the dynamics which are governed” (Voß & Kemp, 2005: 4). It relates to integrating multiple actors, norms, values, and perspectives into a complex understanding of societal change and thereby, refers to the social dimension of governance processes (Voß & Bornemann, 2011; Feindt & Weiland, 2018). Accordingly, reflexive governance can be defined as the process of re-considering how socio-technical systems are governed by challenging normalized assumptions, practices, and actions through an integration of a variety of perspectives, values, and norms (Voß et al., 2006; Hendriks & Grin, 2007).

After an extensive literature review, several interrelated processes characteristic of reflexive governance were identified, which will be elaborated in the following paragraphs in more detail.

Collaborative Problem and Solution Framing

Instead of linear management of clearly definable problems, reflexive governance is concerned with collaborative problem and solution framing (Voß & Bornemann, 2011). Collectively negotiating and conceptualizing the problem at hand is argued to enhance the quality of problem formulation, especially when actively involving actors who otherwise cannot express their problem perception in the public discourse (Voß et al., 2006). Further, actively involving diverse viewpoints is argued to help challenge underlying and taken-for-granted assumptions about problems and solutions in the face of incomplete information and uncertainty (Feindt & Weiland, 2018). Following Voß et al. (2006), critically and collectively evaluating and reevaluating problems and solutions through exploring alternatives is a defining part of reflexive governance concerned with questioning its own objectives and avoiding narrow conceptions.

Integrated Knowledge Production

Also, integrated knowledge production is a central mechanism of reflexive governance (Ersoy & Hall, 2020). Through participatory procedures, reflexive governance supports mutual deliberation between individuals and organizations (Voß et al., 2006). The complexity of the governance objective at hand demands combining and valorizing political, quotidian, and scientific types of knowledge, including different disciplines and practice perspectives (Voß et al., 2006; Ersoy & Hall, 2020). The heterogeneity of complex problem components requires transcending the “boundaries between disciplines and between science and society” (Voß et al., 2006: pp.10). Co-production between stakeholders with diverse epistemic backgrounds is argued to better “capture the broader pluralistic social and economic context” of the governance objective (Ersoy & Hall, 2020: 400).

Social Learning

Schutter and Lenoble (2010) discuss reflexive governance as a learning-based approach, in which procedures are designed to create feedback between multiple actors to provide them with learning opportunities. Mutual learning, deliberation, and participation based on “conscious reflection about the past, present, and future” (Feindt & Weiland, 2018: 669) in the absence of a pre-defined goal are central elements of reflexive governance. Further, it is associated with experimentation and learning by doing (Ersoy & Hall, 2020). Reflexive governance acknowledges participation, deliberation, and joint

learning as key mechanisms for elaborating on alternative futures and developing new approaches (Ferrari, 2020; Feindt & Weiland, 2018). Horizontal learning between multiple stakeholders from diverse backgrounds requires “opening up” reflexive governance towards an open-ended and evolutionary learning process, but also for “closing down” subsequently to retain action capacity in the face of complexity and steer a system towards a normatively framed objective (Voß & Bornemann, 2011).

Scrutinization of Underlying Assumptions and Practices

Re-considering how socio-technical systems are governed by challenging normalized assumptions and practices is fundamental to reflexive governance. It is characterized by a self-critical preoccupation with the governance process (Hendriks & Grin, 2007: 346). This approach results from the ways in which governance processes have been identified as challenges in working towards sustainable development. In this sense, governance processes can make part of the problem structure addressed (Voß & Bornemann, 2011). Accordingly, Ferrari (2020:3) argues that reflexive governance “becomes concerned with its own conditions, perspectives, expectations, knowledge, strategies and dynamics, in order to avoid the assumption of full knowledge in advance.” Reflexive governance arrangements require designs that encourage actors to engage in such self-critical processes, including the making of their own knowledge and the anticipation of long-term effects of their actions (Feindt & Weiland, 2018; Voß et al., 2006).

2.2.2 Reflexive Governance for Enhancing Adaptive Resilience

The concept of reflexive governance has actively been connected to sustainable development and environmental policy (Voß et al., 2006). However, enhancing adaptive urban resilience can likewise function as the normative orientation of reflexive governance. Like sustainable development, enhancing adaptive resilience is an open-ended endeavor characterized by its difficult-to-operationalize nature, long-term orientation, and complexity (Voß & Kemp, 2005).

It is argued that governing resilience calls for a reflexive approach because it should involve a continuous reflection on the underlying principles and assumptions (Duijnhoven and Neef, 2016). Reflexive governance is oriented towards continuous learning rather than complete knowledge and control, which is required for dealing with contested, dynamic, and difficult-to-operationalize governance objectives (Voß & Kemp, 2005; Feindt & Weiland, 2018). Furthermore, adaptive resilience depends on mechanisms that allow for adaptation in line with emerging evidence rather than permanent solutions (Spaans & Waterhout, 2017; Meerow et al., 2016).

Cities' vulnerabilities are at a much higher rate when afflicted by disruptions like disease outbreaks (Cheshmehzangi, 2020). Therefore, It is stressed that reflection about the current experiences is vital for enhancing preparedness for future events (Acuto, 2020). Carpenter et al. (2012) underline the need to assume a long-term view during the crisis and focus on what is needed to build general resilience and mitigate social vulnerabilities. Acuto (2020a) recommends embracing the crisis as a forced experiment to align emergency measures with long-term transformations. It is argued that measures to tackle the corona crisis should address urban challenges of inclusion and sustainability and stimulate the cross-fertilization of debates (Michie, 2020; Markard & Rosenboom, 2020; Peters, 2021; Haase, 2021).

2.3. The Governance Network

The locus of reflexive governance is the governance network (Hendriks & Grin, 2007). In the urban context, governance networks commonly form around complex and uncertain issues, which call for the cross-boundary collaboration of different actors (Voß & Kemp, 2005). Following the definition by van Meerkerk and Edelenbos (2013: 5), the concept denotes "more or less stable patterns of social relations between mutually dependent actors, which form around public issues, and which are formed, maintained, and changed through interactions between the involved actors." Hence, to investigate the characteristics of the governance networks, the actors involved, the ties between them, and the openness of the network should be considered. Further, the participation and decision-making mechanisms in terms of how participants communicate with each other to form decisions and how these decisions are linked to public action must be taken into account (Fung, 2020; Klijn & Koppenjan, 2015). Finally, the role of politics, strategic interests, and organizational culture are considered relevant framework conditions (Hendriks & Grin, 2007).

How specific network characteristics can bring forth deeper, more reflexive social learning remains to be explored. A research perspective on network structure as the independent variable has only begun to emerge in recent times. Yet, it is argued that governance "networks need to serve certain functions to provide an environment conducive to learning" (Newig et al., 2010: 5). A selection of network attributes most relevant to this study's context, and their relationship to reflexivity are discussed below.

Actors

A reflexive mode of governance is contingent upon the collaborative efforts between actors from multiple governmental departments, different sectors, or knowledge backgrounds (Voß et al., 2006; Hendriks & Grin, 2007). Following Voß and Kemp (2005), the reflexive governance framework emphasizes selecting participants who reflect the complexity of the issue at hand. Reflexive governance is inherently participatory and cultivates new links between actors from different sectors (Ersoy & Hall, 2020). Further, the diversity of actors is argued to facilitate mutual learning, experimentation, and innovation (Ostrom, 2005). McNutt and Rayner (2018) link reflexive governance to bonding and bridging social capital. Whereas bringing people with similar traits closer together created bonding social capital, bridging social capital implies that actors can gain vital resources by learning through dissimilar relationships.

Ties between Actors

Closed networks and strong ties between actors in the governance network are likely to hinder reflexivity. Openness is a key attribute for a network conducive to open-ended learning (Gottschick, 2018). While bonding between actors can be an outcome of deliberative joint learning, it is also argued to create trusted sources of information that restrain flexibility. Furthermore, long-term stable relationships are suggested to hinder actors from critically reflecting on ends and processes due to social closure (McNutt & Rayner, 2018; Newig et al., 2010).

At the same time, trust appears to be a relevant factor for enabling reflexive governance as it is associated with stimulating learning and knowledge exchange (Klijn & Koppenjan, 2015). Reflexive governance is depicted as taking place in a form of self-organization that relies upon trust, deliberation, and information sharing (Kemp & Loorbach, 2006; McNutt & Rayner, 2018). Especially in the face of risk and uncertainty, trust presents a vital coordination mechanism for complex decision-making (Klijn, & Koppenjan, 2015). Trust is often framed as the most important factor influencing inter-organizational relations (Williams, 2002). Therefore, inter-organizational trust plays an essential role in substituting formal coordination mechanisms such as complex contracts and is found to enhance performance and efficiency in inter-organizational exchanges (Gulati & Nickerson, 2008). In this regard, a discrepancy regarding the relationship between trust and reflexivity becomes clear: While weak ties offer opportunities for more critical learning through new information and knowledge by allowing for bridging with actors beyond the current network boundaries to occur, the absence of trust and shared values hamper the effectiveness of the governance structure (Newig et al., 2010; McNutt & Rayner, 2018).

Decision-Making and Participation Mechanisms

The distribution of decision-making power and authority are key aspects to consider when analyzing the governance network. Centralized decision-making power and hierarchy hinder flexibility. It is argued that for reflexive governance to occur, discursive spaces must allow for the deliberation between different actors with the purpose of jointly re-considering the governance objective. In other words: the aggregate voice should be influential for fundamental decision-making (Rotmans & Loorbach, 2008). Hence, to be effective, reflexive governance should have a clear link to public decision-making and bring forth tangible outcomes such as shifting policy objectives and adapting governance processes and arrangements (Sol et al., 2017; Voß & Kemp, 2005). McNutt and Rayner (2018) emphasize that deliberative and horizontal learning without a clear distinction between teachers and learners functions as a central coordination mechanism for reflexive governance.

Organizational Culture

Reflexive governance is understood to be contingent upon governance arrangements designed to allow for the reflexive adaptation of rules and procedures and reflexive capacity-building in that they encourage actors to scrutinize underlying assumptions, practices, and beliefs (Feindt & Weiland, 2018). For instance, a large bureaucracy is suggested to hinder reflexive governance due to the prevalence of normalized and routinized practices (Cunliffe & Jun, 2005). Also, the complexity of modern organizations like municipalities is argued to present a barrier to organizational learning and adaptation (Senge, 1997). Klemsdal (2012:39) highlights flexibility to act in novel ways as an important attribute of a learning-oriented organizational culture. In this regard, he stresses the tension between the organizational structure of municipalities, which - traditionally organized as bureaucracies - are built around values like the strict adherence to rules and procedures. To create an organization that is better able to engage with its environment, learning from the past and the best practices of others, experimenting with new approaches, and transferring knowledge across the organization are core challenges (Garvin et al., 2008).

Political Agendas

Notably, the reality of reflexive governance includes power struggles. Political agendas and strategic interests are suggested to often conflict with reflexive governance in the context of sustainable development (Voß & Bornemann, 2006; Feindt & Weiland, 2018). Voß and Bornemann (2011: 2) argue that it is one of the conceptual shortcomings of the reflexive governance literature to have “blocked out” the political dimension from the complexity of the systems entwining reflexive governance. As a

result, the authors suggest that the implications “of politics for participation, experimentation, and collective learning” remain unclear. Similarly, Hendriks and Grin (2007: 336) raise awareness for the under-exposed fact that reflexive governance relates to “the existing preferences and demands of elected officials, the legislature, the market and the public.” In this sense, actors’ attempt to reconcile the conflicting demands of reflexive governance (“being open, self-critical, and creative”) and the political world (“closed preferences, agenda-driven, control”) appears to result in challenges to enacting reflexive governance (Hendriks & Grin, 2007: 346).

2.4 The Crisis as a Condition for Governance

Crises can affect urban governance dynamics in multiple ways. The COVID-19 pandemic has triggered interconnected health, economic, and social crises. Economically, preventive measures have led to revenue losses for sectors especially dependent on immediate consumption or international value chains, followed by unemployment and fiscal problems for governments (Peters, 2021). However, Peters (2021) argues that the social dimension of the crisis inhibits the most wicked challenges. Haase (2020) refers to the pandemic as a “justice challenge for cities” because it exposes and reinforces underlying social inequalities and inequities while making it likely that the disadvantages for the most vulnerable are also worsened in the long run.

Therefore, the corona crisis multifaceted impacts on cities are argued to stimulate and require deep reflection upon a wide array of underlying social, economic, and institutional weaknesses, vulnerabilities, and injustices, as well as the governance processes that produce and reproduce them (Sharifi & Khavarian-Garmsir, 2020; Acuto, 2020b). This chapter presents how crises - and the COVID-19 crisis in particular - are discussed as a condition for governance in current literature and research.

Heightened complexity

The corona crisis reinforces the complexity of the environments in which governments operate. Ansell et al. (2020) argue that the COVID-19 pandemic presents a game-changer for public administration because of its unpredictable, inconsistent, and uncertain cross-boundary dynamics. Bureaucratic government is arguably ill-equipped to deal with turbulence. The pandemic challenges the limits of the public sector by rendering the “standard repertoire of foresight, protection, and resilience strategies” obsolete (Ansell et al., 2020: 949). The corona crisis has exposed complex interactions between different sub-systems related to the economy, healthcare, and public order. It has demonstrated how policies can produce unintended side effects because of complex system interdependencies (Kontogiannis, 2021).

Hynes et al. (2020) emphasize how this crisis has shown how subjective factors like citizens' trust in institutions or their sense of belonging can influence adherence to protective measures and thereby critically shape how a disaster unfolds. Thus, the increased complexity in a crisis situation lets a connection to reflexive governance be drawn, which is geared to consider the complexity of governance issues and processes (Rotmans & Loorbach, 2008).

Opportunity for Change and Transformation

The COVID-19 pandemic, with its substantial impacts on cities, can arguably generate more “support for urban transformative actions towards dealing with other important threats such as climate change” (Sharifi & Khavarian-Garmsir, 2020: 12). Furthermore, it is suggested that the COVID-19 pandemic uniquely challenges how we think about cities, and this way provides an opportunity for the re-thinking of urban governance practices (Acuto, 2020a; Sharifi & Khavarian-Garmsir 2020). Acuto et al. (2020: 987) refer to the pandemic as “a window for urban opportunity” to address underlying urban challenges such as sustainability and inclusiveness in recovery plans. Also, McGuirk et al. (2020: 189) suggest that the pandemic creates a setting in which systems of urban governance can be transformed, governance ends re-defined, agendas reset, and collaborative practices expanded. Regarding the pandemic as a mandate for change resonates with resilience thinking, which asserts that a “resilient social-ecological system may make use of crisis as an opportunity to transform into a more desired state” (Folke et al., 2005: 441).

Urgency to Act

As Cordero et al. (2016) point out, the semantics of crises suggest urgency and speed. During moments of crisis, a heightened sense of time pressure evokes the need to act and react swiftly (Garavaglia et al., 2020). Concerning governance during the COVID-19 pandemic, Janssen and van der Voort (2020: 2) refer to the “sense of urgency to adapt.” The urgency of the crisis is argued to have facilitated rapid governance innovations. Hynes et al. (2020) explain that COVID-19 implies an urgency to act because – due to the integrated nature of the crisis – it is unknown how changes in one system will evolve in a short time and impact other systems. There is an urgent need for quick-fix solutions because the longer a social system remains in a state of disturbance, the longer recovery will take (Carpenter et al., 2012). The need to quickly reduce social vulnerabilities after the crisis is emphasized because failing to do so will amplify risks. Further, the corona crisis is framed as a pressing call to re-think urban governance practices and processes (Van Belle et al., 2020), suggesting a conceptual link between the urgency evoked by the crisis and reflexivity.

Pressure on Resources

Whereas the COVID-19 pandemic reveals critical insights regarding cities' underlying fault lines and sheds light on opportunities for change and transformation, city leadership is faced with major impediments while in the crisis (Acuto, 2020a; Wells et al., 2020). In this context, a declining tax base, the fragmentation of governance regarding conflicts about resources, stifled powers (Sharifi & Khavarian-Garmsir, 2020; Acuto, 2020a), gaps in funding, data, and municipal capacity (Resilient Cities Network, 2020a) have been found to present barriers for realizing resilient crisis recoveries. Accordingly, while the corona crisis offers many new experiences to be reflected and reacted upon, it also sets reflexive governance under pressure by straining governance resources.

2.5 Influence of Crisis and Governance Network Factors on Reflexive Governance

In a resilient system, the COVID-19 pandemic, as adversity and shock, functions as the trigger for adaptive response (Ticlau et al., 2020). McGuirk et al. (2020) argue that the pandemic disrupts institutional forms, relations, and traditional practices of city governing by setting off innovation and forced experimentation. According to the authors, the crisis can boost new socio-political arrangements for urban governance and loosen institutional constraints.

Menoni and Schwarze (2020) assert that recovery planning must be interdisciplinary. They emphasize that the consultancy for crisis recovery should involve a large variety of experts from different scientific and practice domains and representatives of relevant societal sectors due to the complexity of the crisis' dynamics. Their different skills and knowledge should be applied for a collaborative framing of problems and solutions in view of the multidimensionality of the crisis impacts. A study about local government crisis response and recovery in the U.S. emphasizes the need to create, maintain, and expand partnerships and networks with neighboring jurisdictions to foster learning (Dzigbede et al., 2020: 634).

Further, it is argued that the pandemic has reinforced the distributed nature of urban governance capacity across not-for-profit, community, and private actors. Next to the resurgence of local civic initiatives in cities, the corona crisis has intensified collaboration between cities in international networks (McGuirk et al., 2020). More specifically, emerging insights on urban governance during the COVID-19 pandemic highlight the role of international city networks, which facilitate the exchange of best practice approaches, knowledge, and policy (Acuto & Leffel, 2020; McGuirk et al., 2020). Recent contributions from the Resilient Cities Network stress the emerging need for experience

and inspiration sharing across cities, multi-stakeholder initiatives, and holistic urban recovery planning (Global Resilient Cities Network, 2020). McGuirk et al. (2020) argue that international networks between cities, like the Cities for a Resilient Recovery Platform, play an essential role in addressing urban resilience challenges and creating a knowledge base for integrated urban recoveries with a perspective on transformative solutions. In this sense, the corona crisis has offered an opportunity for a re-launch of the Resilient Cities Network as a much more “bottom-up initiative of cities” (Acuto, 2020b: 222). Thus, whereas the importance of local and international networks is frequently emphasized, recent publications neither explicitly address how the mechanisms of reflexive governance are applied to leverage lessons learned into urban recovery and resilience strategies, nor how these are constrained or enabled during the crisis.

Conclusively, it becomes apparent how crisis-specific conditions and governance network attributes can interact because the dynamics of the crisis might create new knowledge needs that require new actors or lead to a relaxation of bureaucratic procedures through the evoked sense of urgency (Paton et al., 2000). At the same time, reflexive governance can also be hampered not only through political agendas and learning averse organizational cultures but also by the heightened pressure on municipal resources specific to the situation of the corona crisis.

2.6 Conceptual Framework

The conceptual framework summarizes the intent of this research and depicts the relationships between variables, which will be investigated through empirical research. As discussed previously, reflexive governance is a self-reflective, participatory, and learning-based mode of steering complex issues. Based on an extensive literature review, I identified four strategic processes of reflexive governance that are most frequently discussed in theory and relevant to the context of this study, namely: collaborative problem- and solution- framing, integrated knowledge production, social learning, and the scrutinization of underlying assumptions and practices. These specific processes relate to the governance network and the conditions created by the situation of the corona crisis. Thereby, the first independent variable - “governance network attributes” - encompasses factors like the involved actors, the strength of their ties, the participation, interaction, and decision-making mechanisms, organizational culture, and relevant political agendas. The second independent variable – “crisis-specific conditions,” is operationalized as the heightened problem complexity during the corona crisis, the window of opportunities for change and transformation, the urgency to act, and the intensified pressure on organizational resources during the corona crisis. This thesis focuses on how these two independent

variables interact and influence the dependent variable, the adoption of reflexive governance in view of resilient urban crisis recoveries in the Dutch cities The Hague and Rotterdam.

Based on the arguments presented, it is expected that the different factors related to the governance networks and the peculiarities of the corona crisis - as health, economic, and social challenge combined (Peters, 2021) - hinder or boost reflexive governance. As the conditions of the corona crisis are likely to have played out in similar ways in the neighboring cities, variation between the two case studies is expected with regards to the characteristics of the governance networks.

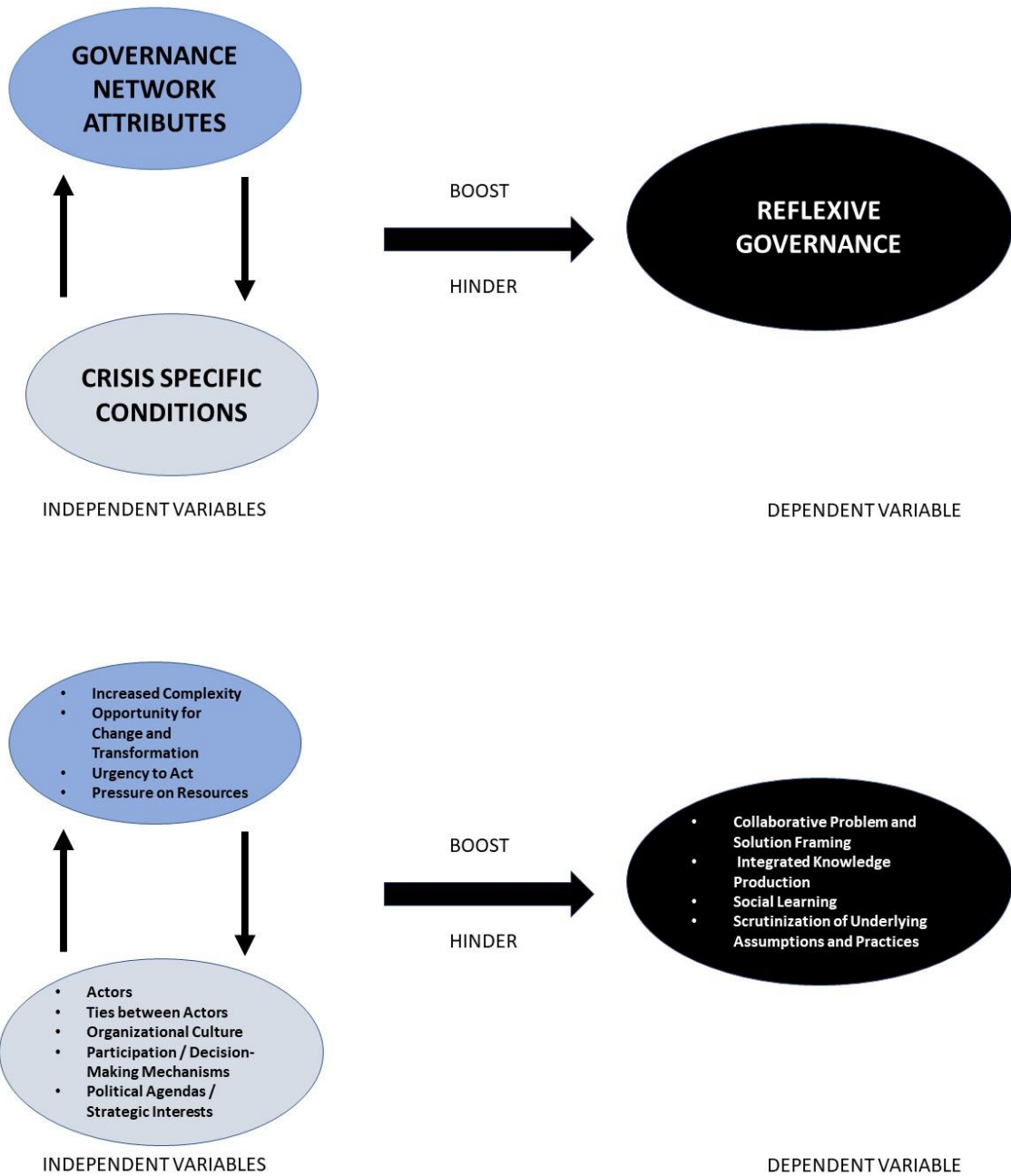


Figure 1 Conceptual Model

3. Methodology

This chapter provides an overview of the methods used by this study. It presents the research design, the research instruments, the methods for data analysis, the operationalization of the main research concepts, and the limitations of the methodology.

3.1 Research Design

This subchapter elaborates on the choice for the multiple case study design before going into more detail on the rationale for the case study selection.

3.1.1 Multiple Case Study Design

The research design adopted is a multiple case study design (Bryman, 2012). In this study, the resilience programs of the Dutch cities Rotterdam and The Hague make up for the units of analysis. The time-specific context is the recovery from the COVID-19 pandemic, even though interview respondents discuss their experiences related to the different crisis phases. The case study design coupled with the qualitative research method does justice to this study's focus on gaining an in-depth understanding of the conditions enabling or boosting reflexive governance during the crisis. The qualitative research method is best suited when dealing with the dynamics of social phenomena (Steiling, 2001). It allows for an in-depth analysis of the reflexivity of governance processes at work and how these are influenced by an interplay of crisis-specific and governance network-related factors (Alasuutari, 2010).

Additionally, as Stewart (2012) points out, the multiple case study design is specifically suited for understanding the influence of the context on a specific phenomenon. In governance-related research, the multiple case study design allows for an understanding of the effect of governance setting on processes or outcomes. Therefore, the multiple case study design is assumed to illuminate how the difference in governance network attributes between the cities of The Hague and Rotterdam play a role in determining how reflexive governance was adopted during the COVID-19 crisis. This way, the variance in the independent variables can help to explain differences regarding the dependent variable (Stewart, 2012). Accordingly, variance in the governance settings will enhance the validity of the research findings (Bryman, 2012).

3.1.2 Case Study Selection

Rotterdam's and The Hague's resilience programs and their networks make up as empirical cases of this study. The Netherlands is an interesting location for studying the governance of urban resilience, which

has become increasingly relevant to urban policy in recent times (Moraci et al., 2018). Furthermore, the two cities provide suitable cases regarding this study's research objective because of their commitment to enhancing urban resilience through their membership in the Resilient Cities Network. Rotterdam and The Hague are the only Dutch cities joining the network so far. The cities have committed to integrating resilience principles into crisis recovery by joining the open and participatory platform Cities for a Resilient Recovery (Resilient Cities Network, 2020a). More generally, The Hague and Rotterdam appear to have been motivated to join the Resilient Cities Network because of the opportunity for external funds, broaden resilience-related work to more policy domains, and engage in knowledge-sharing with other cities. The network has funded the positioning of Chief-Resilience-Officers in The Hague and Rotterdam. Besides urban resilience strategy development and implementation, dedicated resilience teams are engaged with propagating resilience thinking across different administrative departments at the municipalities (Huck et al., 2020; Spaans & Waterhout, 2016; Gemeente Den Haag, 2018).

The similar population sizes and spatial proximity between the two cities provide comparable framework conditions for theoretical replication. However, Rotterdam had joined the Resilient Cities Network several years before its neighboring city, The Hague, making it likely that resilience thinking has matured further in Rotterdam. The extent to which resilience has entered the policy mainstream is suggested to affect the integration of sectoral decision-making practices by bringing actors across institutional and sector divides closer together (Huck et al., 2020). Furthermore, the diverging focus areas regarding resilience are likely to engender different key actors and settings for knowledge exchange. Therefore, the expected variance between the cities' governance structures in the resilience context renders a comparison between the two case studies a promising approach for better understanding the relationship between reflexive governance and governance network attributes (Stewart, 2012).

3.2 Data Collection

After elaborating on the qualitative interviews as the selected method for data collection, the sample of interview respondents will be addressed.

3.2.1 Qualitative Interviews

Eighteen in-depth interviews with actors from the resilience teams in The Hague and Rotterdam informed the study. The interviews were conducted via Zoom and MSTeams between the 28th of April and the 4th of June, 2021. The interviews lasted between 30 and 60 minutes resulting in an overall 12,5 hours of interview material. The sampling method adopted is purposive sampling (Bryman, 2012).

Contact with the respondents was established through the snowball sampling technique. With the help of the first contact persons, additional key actors involved in learning processes regarding urban resilience during the corona crisis were identified. The snowball sampling technique is particularly applicable because it helps to access networks of individuals. Hence, an advantage of this technique is that it both capitalizes on- and exposes the connectedness of actors (Bryman, 2012).

This research adopts the research method of qualitative interviewing because it is well suited for illuminating how actors perceive different factors related to the crisis or the governance network to influence the adoption of reflexive governance. Further, it allows for flexibility of the research's direction in line with significant issues emerging during the interviews. This way, the in-depth interviews allow for factors not accounted for in the theoretical framework to be considered. Consequently, the interview guides are designed in a semi-structured manner to balance between granting space for unexpected topics, retaining a focus on the overarching research question, and assuring the comparability of results (Bryman, 2012). The interview guides can be found in Appendix B.

3.2.2 Interview Respondents

The 18 interview respondents represent key actors dealing with adaptive urban resilience during the COVID-19 pandemic in Rotterdam and The Hague. To assure the triangulation of perspectives and thereby enhance the internal validity of this research (Flick, 2009), actors from different knowledge and practice backgrounds were interviewed. This includes coordinating members of the resilience programs in Rotterdam and The Hague, stakeholders from the municipalities, such as strategic advisors of different departments, and external stakeholders from knowledge institutions and NGOs, which have collaborated with the resilience programs in the course of the corona crisis. Due to the dynamics resulting from the snowball sampling method, the number of interviewees differs across the two case studies. Thus, seven interviewees relate to the governance of resilience in The Hague, and eleven to Rotterdam. An anonymized overview of interview respondents is presented in the chart below. A more detailed overview can be found in Appendix B.

No.	Position / Affiliation
1	Researcher + Coordinator of Policy-Science in Interface Rotterdam, Research on Community Resilience during the Corona Crisis
2	Researcher, Centre of Expertise Governance of Urban Transitions, The Hague University, Research Socio-Economic Impacts of the corona crisis
3	Director Impact and Response Team, Municipality Rotterdam
4	Deputy Resilience Officer, Resilient Rotterdam
5	Project Secretary, Impact and Response Team, Municipality Rotterdam
6	Chief Resilience Officer, Resilient The Hague
7	Founder, NGO (Training Program for Community Actors) The Hague
8	Communication Advisor and Press Officer, Erasmus University
9	Coordinator, Resilient Medellin
10	Research and Knowledge Coordinator, Municipality Rotterdam
11	Researcher, Policy-Science Interface in Rotterdam, Research Socio-Economic Impacts of the Corona Crisis
12	Researcher, Research Platform Rotterdam, Research on "Resilient Neighborhood Bo-Tu"
13	Strategic Advisor Central Management, Municipality Rotterdam
14	Coordinating Strategy Advisor Department of Social Affairs, Municipality Rotterdam
15	Director, Centre of Expertise Governance of Urban Transitions, The Hague University
16	Strategist, City Hall Rotterdam
17	Strategic Advisor, Urban Development, Municipality of The Hague
18	Junior Strategy Advisor, Social Affairs, Municipality of The Hague

Table 1 List of Respondents

3.2.3 Documents

Further, a few relevant documents related to the activities of Rotterdam's and The Hague's resilience programs during the crisis have been integrated into the analysis to complement and contextualize information from the interviews. An overview of these documents is provided in the table below.

Case	Document Name
Rotterdam	<u>D 1-10:</u> <i>Knowledge and Inspiration Updates 1-10, April 2020 to January 2021, Gemeente Rotterdam</i> <u>D 11:</u> <i>Rotterdam. Sterker Door. https://www.rotterdam.nl/bestuur-organisatie/sterker-door/</i>
The Hague	<u>D 12:</u> <i>Voorjaarsnota 2020 en financiële en maatschappelijke impactanalyse gevolgen Coronacrisis, 04-06-2020, Gemeente Den Haag</i> <u>D 13:</u> <i>Maatschappelijke Impactanalyse en Sociaaleconomisch herstelplan corona 29-10-2020, Gemeente Den Haag</i>

Table 2 List of Documents

3.3 Data Analysis

The qualitative interviews were recorded and carefully transcribed. Subsequently, the interview transcripts were analyzed in the coding platform Atlas.ti. The codes were generated based on the conceptual model (2.7) and with regard to how the central concepts have been operationalized into indicators (3.4). Additionally, new codes are generated where relevant. Strauss and Corbin's (1990) multiple-round coding practice guides the data analysis. Open coding helps break down and conceptualize data before the codes are categorized into higher-order analytical code groups in the second phase of axial coding. An overview of codes and how they have been arranged into higher-order code groups can be found in Appendix D. Finally, these code groups were related to each other in the last phase of selective coding.

3.4 Operationalization

The main concepts of this research are operationalized into indicators, which help to detect and evaluate them throughout the empirical data collected. An overview of how these main concepts, the governance network attributes, crisis-specific conditions, and reflexive governance, are operationalized is provided in the following charts.

3.4.1 Independent Variable 1: Governance Network Attributes

Dimension	Subdimension / Definition	Indicator
Actors	An individual, group, organization, or coalition of organizations that can act autonomously, and that is actively involved in the problem (based on Klijn & Kopperjan, 2015: 263)	The extent to which actors from different societal, scientific and practice backgrounds are involved in the governance of adaptive urban resilience
Ties between Actors	<p>Strength of Ties: The “combination of the amount of time, the emotional intensity, and intimacy (mutual confiding), and the reciprocal services that characterize that tie” (Granovetter, 1973: 1361)</p> <p>Network Openness: The diversity of partnerships and willingness to accept new network members (based on Eisingerich et al., 2010)</p>	<p>The amount of time actors have been in a reciprocal relationship with one another</p> <p>The extent to which different actors in the governance network trust each other</p> <p>The extent to which the governance network is open to new members</p>
Organizational Culture	The pattern of basic assumptions and values held and considered valid by the organization and which determine the prevalent behavior exposed (based on Schein, 1987)	The extent to which organizational culture is conducive to learning and the adaptation of rules and procedures in line with emerging insights
Decision-Making and Participation Mechanisms	<p>Distribution of Decision-Making Power: The degree to which decision-making power is shared between governmental and non-governmental actors (based on Wang et al., 2018)</p> <p>Participation and Interaction Mechanisms “(...) how participants communicate with one another and make decisions together, and how discussions are linked with policy or public action” (Fung, 2006: 66)</p>	<p>The extent to which decision-making power regarding urban resilience is (de)centralized</p> <p>The mechanisms of participation and interaction in the governance network</p> <p>The extent to which participation has an impact on public action related to urban resilience</p>
(Political) Agendas and Strategic Interests	Strategic (political) motives and motivations (publicly articulated or not) that affect decision-making (based on McConnell, 2018)	The extent to which (political) agendas and strategic interests affect the governance of urban resilience

Table 3: Operationalization of Governance Network Attributes

3.4.2 Independent Variable 2: Crisis-specific Conditions

Dimension	Definition	Indicator
Heightened Complexity	Actors' perception of increased complexity in the governance environment as a consequence of the corona crisis	The extent to which actors perceive the complexity in the governance environment to be heightened as a consequence of the corona crisis
Opportunity for Change and Transformation	Actors' perception of new and emerging circumstances related to the corona crisis that make it possible to steer towards transformation and implement changes	The extent to which actors perceive an opportunity for change and transformation as consequence of the corona crisis
Urgency to Act	Actors' heightened sense of the importance of acting swiftly as a consequence of the corona crisis	The extent to which actors perceive an urgency to act as consequence of the corona crisis
Pressure on Resources	Actors' perception of increase in pressure on governance resources such as time, money, and human capital as consequence of the corona crisis	The extent to which actors perceive resources to be under pressure as consequence of the corona crisis

Table 4: Operationalization of Crisis Conditions

3.4.3 Dependent Variable: Reflexive Governance

Dimension	Definition	Indicator
Collaborative Problem and Solution Framing	A collaborative effort of reformulating and determining the aspects of the problem to be attended, the ends to be sought and means to be employed (based on Schön, 1983; Minsky, 1977)	The extent to which collaborative problem and solution framing concerning adaptive urban resilience has occurred during the corona crisis
Integrated Knowledge Production	Different sources of knowledge are valorized and combined; including different scientific disciplines and practice perspectives (based on Ersoy & Hall, 2020)	The extent to which integrated knowledge production concerning adaptive urban resilience has occurred during the corona crisis
Social Learning	Learning occurs through interaction between actors from various knowledge and practice backgrounds (based on Reed et al., 2010; Voß & Bornemann, 2011)	The extent to which social learning concerning adaptive urban resilience has occurred during the corona crisis
Scrutinization of Underlying Assumptions and Practices	Actors in the organization actively challenge their own assumptions and practices to adapt governance processes and objectives accordingly (based on Hendriks & Grin, 2007; Feindt & Weiland, 2018)	The extent to which underlying assumptions and practices concerning adaptive urban resilience have been actively scrutinized during the corona crisis

Table 5: Operationalization of Reflexive Governance

3.5 Limitations of Methodology

Qualitative research commonly involves fewer units of data analysis as compared to quantitative research. Nonetheless, qualitative research methods can take into account richer accounts of respondents' experiences and perceptions, and provide a more nuanced and dynamic understanding of their social world (Alasuutari, 2010). Unlike the formal theories generated by large-scale quantitative studies, theoretical implications generated by qualitative data are substantive in character (Bryman, 2012). Thus, analytical findings and theoretical implications pertain to the substantive case studies and are not generalizable. Furthermore, qualitative data collection and analysis are shaped by the interpretative stance of the researcher (Fink, 2000). The process of data collection and analysis is arranged as transparent as possible by publishing coding schemes, interview questions, and the list of interviewees (see Appendix A, B, D). This enhances the reliability of research results. An additional limitation of this study is that translating lessons learned from the crisis into long-term recovery and resilience strategies is still ongoing during the time of research. This delimits a definitive assessment of how reflexive governance during the crisis has been leveraged to develop or adapt governance processes arrangements, and resilience strategies.

4. Results and Analysis

The results of the research will be presented and analyzed in the following sections. First, the empirical case studies will be introduced. Second, it will be shown how reflexive governance took shape in Rotterdam and The Hague in view of enhancing adaptive resilience during the corona crisis. Third, it is analyzed how crisis-specific conditions and governance network attributes have influenced the reflexivity of governance processes regarding the two case studies. Based on the results of this study, these factors are divided into boosts and barriers for reflexive governance, respectively. The chapter will end by analyzing the interplay of factors and how differences in the governance settings between The Hague and Rotterdam account for variations on the dependent variable; reflexive governance.

4.1. The Case Studies: Empirical Insights

This chapter provides an introduction to the empirical case studies. It is outlined how activities around the governance objective of urban resilience took shape in Rotterdam and The Hague during the corona crisis.

4.1.2 Enhancing Adaptive Resilience during the Corona Crisis in Rotterdam

Rotterdam has been a member of the Resilient Cities Network since 2014. The city's resilience team is integrated into Rotterdam's municipality. Currently, it is a small team consisting of five people, including the city's Chief Resilience Officer and Deputy Resilience Officer. Therefore, roles and responsibilities are flexibly divided amongst the team members. The focus areas defined by Rotterdam's current resilience strategy are social cohesion and education, the energy transition, cyber use and security, adaptation and climate change, infrastructure, and changing governance. Specifically, it used to be concentrated on the risks and opportunities brought forth by developments like "climate change, digitalization, the new economy, and globalization" (Resilient Rotterdam, n.d.). Whereas it presents the instance to emphasize the need to prepare for shocks and stresses, at the outset of the pandemic, the resilience team had to negotiate its role and function in the crisis organization because one was not prepared for a shock of this complexity and scale. Respondents explained that the resilience unit was not actually equipped with the skills and expertise to take part in the ad hoc management of the corona crisis. Accordingly, it was decided to focus on a long-term perspective to enhancing urban resilience. Followingly, the question of how to "build back better" from the corona crisis with a focus on transformative and systemic change became the point of attention.

To address this question, the resilience team forged a coalition with the interdisciplinary "Crisis Impact and Response" team to monitor the pandemic's multifaceted impacts on Rotterdam. Regarding

the different temporal scales of crisis organization, the responsibilities of the “Crisis Impact and Response” team are located in between ad hoc crisis management and recovery. This interdisciplinary unit consisted of representatives from different directions of the municipality, such as security, social affairs, welfare, and economy. Not having worked together before the crisis, they started meeting digitally to collect data and formulate advice on dealing with the effects of the crisis on Rotterdam. A few members of the resilience and crisis impact units joined forces to create a series of *Knowledge and Inspiration Updates*. These updates were targeted at strategic managers and aimed to make the concepts of a resilient crisis recovery and adjacent transformation more concrete. Overall, ten *Knowledge and Inspiration Updates* were published every four to eight weeks between April 2020 and January 2021, containing expert interviews and international best practices. Thematically, specific attention was paid to the different crisis phases; resistance, recovery, and transformation. The international best practices presented mainly focused on facilitating the adaptation of economic sectors heavily impacted by the pandemic like tourism, culture, and hospitality, as well as the overlap between the corona crisis and topics like sustainable urban mobility and infrastructure transitions (D1-10). The international and local crisis experts featured in the reports were contacted through the existing networks from the members of both teams.

At the same time, interaction with international partner cities through the Resilient Cities Network intensified during the crisis. Especially at the outset of the pandemic, digital meetings with resilience teams abroad were frequently held. Insights obtained through webinars organized by the open and participatory platform Cities for a Resilient Recovery were translated back into the *Knowledge and Inspiration Updates*. Next, it was explained how interviews with cities to which “friendly connections” are maintained helped to better understand how crisis impacts and crisis mitigation measures took hold abroad. Namely, it was sought to learn from the mistakes and successes of those cities already further ahead in the course of the corona crisis and understand how resilience teams position themselves in the crisis organization within their own cities’ administrations. Also, weekly meetings with the resilience team of the neighboring city, The Hague, were held at the beginning of the crisis to exchange experiences and working methods.

Furthermore, research on the socio-economic impacts of the corona crisis and the coming about of community initiatives was set in a joint effort between Rotterdam’s municipality and a policy-science interface specialized in urban research. As a result, several research reports on the socio-economic impacts were conducted at different stages of the crisis. Also, ongoing research on community resilience in Rotterdam’s pilot project of a “resilient neighborhood” Bospolder-Tussendijken was scaled up. In this

context, researchers and members of the resilience and crisis impacts teams discussed which information would be relevant to obtain through the researches and how policy advice can be matched with the knowledge needs of the municipality. Further, workshops on the different dimensions of the corona crisis impacts and policy-science transfer were organized in a joint effort between the municipality and knowledge institutions.

Rotterdam's overarching urban recovery strategy, "Rotterdam Sterker Door," which translates to "Building Rotterdam Back Stronger," is thematically influenced by the resilience concept. The guiding principle is that recovery initiatives should contribute to a more resilient society and economy. Therefore, the central strategy department consulted the resilience unit on how to integrate resilience principles into the urban recovery plans. Nonetheless, the recovery strategy's focus is very much directed at responding to the immediate crisis impacts such as the backlogs in education and the increasing debts of local companies and entrepreneurs. Thus, it takes a perspective on the short- to medium-term recovery with a specific focus on economic challenges (D11).

During the time of data collection, spring to summer 2021, the resilience team was working on drafting its own strategy in light of the corona crisis. While currently not formalized yet, this new urban resilience strategy will include a designated chapter on the lessons learned from the crisis. To harness these lessons systematically, the resilience team asked partners from knowledge institutions to analyze the aspects of vulnerabilities that have been laid bare during the crisis, the resilience that Rotterdam has showcased, and whether the policies of Rotterdam's recovery strategy and the international best practices presented in the *Knowledge and Inspiration Updates* respond to these. In addition, it was critically investigated whether Rotterdam's crisis response and recovery policies indeed incorporate a perspective on systemic transformation and which transformations would be relevant considering the learnings from the crisis. Further, it is planned to interview representatives from different city sectors to better understand how resilience and transformation have taken place in local sectoral networks. Besides, the focus of the resilience strategy will be directed at developing a new knowledge agenda, new pilot programs, further establishing resilience-thinking across the municipality, and using resilience as a label that adds value to urban development. Compared to Rotterdam's current resilience strategy focused on different projects and specific actions, the new strategy will reportedly revolve more around organizing interdisciplinary learning and organizational capacity-building. However, the finalization of the resilience strategy has been delayed for several months and is currently expected for autumn 2021.

4.1.2 Enhancing Adaptive Resilience during the Corona Crisis in The Hague

The Hague has been a member of the Resilient Cities Network since 2016. Just like in Rotterdam, The Hague's resilience team – composed of the Chief Resilience Officer and two public servants – is part of the municipality. The focus areas defined by The Hague's resilience strategy are a connected and inclusive society, the new economy, climate change adaptation, risk awareness and emergency preparedness, and collaboration with partners. Similar to Rotterdam, it was described how the beginning of the corona crisis presented a period of re-orientation regarding the role and function of the small resilience unit. It was established that the capacities of the resilience team are not suited for engaging in municipal ad hoc crisis management. Therefore, it was decided to focus on the city's long-term recovery. In April 2020, very shortly after the outset of the crisis in the Netherlands, it was started working on a proposal for the city's central management and corona steering committee regarding a process towards drafting a resilient urban crisis recovery strategy under the guiding principle of "building back better."

At the same time, the collaboration with other cities from the Resilient Cities Network intensified at the outset of the crisis. The Hague contributed to the webinars organized by the network with a session on how urban heatwaves in combination with lockdown measures create new vulnerabilities. The ideas presented by other cities were translated back into advice for the own organization. Also, one-on-one meetings with other cities were held to learn about the specific working methods they adopted. Especially, the resilience program in Medellin presented a key partner. The Hague set up individual meetings with Medellin from March 2020 onwards to learn about the resilience assessment tool they had co-designed and deployed during the corona crisis.

Followingly, The Hague's resilience program adopted and further developed this method. Consequently, 50 interviews with stakeholders from different sectors, communities, and social facilities present in the city were held at the beginning of the pandemic to better understand how the resilience of the city takes shape in the face of the crisis' impacts. An NGO listed in The Hague's resilience strategy, which maintains a network of influential and active actors of different cultural communities in The Hague, helped organize the interviews. The insights based on this assessment were collected in an internal resilience assessment document and shared with the municipality's corona steering committee.

Additionally, the resilience unit collaborated on two socio-economic crisis impact assessments in spring and autumn 2020. These impact assessments were created by an interdisciplinary unit consisting of representatives from different directions of the municipality and were led by the city's strategy department. The socio-economic impact assessments give a broad overview of the impacts of the

corona crisis on The Hague's citizenry and the financial resilience of the municipality. Further, they address the foreseeable impacts for the coming one to two years. Based on these impact analyses, strategies for socio-economic recovery for the short- to medium-term were created. These recovery plans cover the crisis impacts considered most urgent and immediate, like debts, education, and the mental well-being of the youth (D12-13).

Next to sources like the municipality's monitor and national research, survey research on the socio-economic impacts of the corona crisis in The Hague informed these impact analyses. While Rotterdam started off this large-scale survey research project, The Hague joined soon after that in April 2020 based on a proposal by researchers from the Center of Expertise Urban Transitions of The Hague University. Together with the municipality's education department, The Hague's resilience team became a stakeholder for the research project in distributing surveys to citizens through the networks of the NGO and organizing financing for the project as The Hague had no funding model for science-policy collaborations in place.

The plan of starting a process for making a long-term resilient recovery strategy, which was the resilience program's key concern during the corona crisis, was delayed significantly. One year after having started with the proposal, the participatory process for making this strategy has still not been finally approved. It was explained that the reason for this delay is key actors from other municipal departments, who were argued to be needed for drafting an integrated long-term plan, being heavily engaged with crisis management and short-term recovery. The themes, focus points, and actions of this strategy are still to be determined according to input from stakeholders within the municipality and external stakeholders from different sectors and communities in the city as well as different levels of government. Ultimately, it is aimed to integrate the long-term crisis recovery strategy with the shocks such as cyber-attacks and extreme weather and stresses like climate change and digitization, which are listed in The Hague's urban resilience strategy. Thus, long-term recovery strategy's focus will be broader and focusing on more diverse overlaps between different urban challenges and the corona crisis compared to the short-to-medium socio-economic recovery plans. These overlaps will be addressed in light of the residents' socio-economic vulnerabilities emphasized through the various impact analyses, research, and the resilience assessment conducted during the crisis.

4.2 The Case Studies as Exemplars of Reflexive Governance?

This section critically analyzes the two cases in light of the reflexive governance concept. As Meadowcroft and Steurer (2018) emphasize, reflexive governance is a matter of degree rather than an “all-or-nothing proposition.” Hence, the degree to which reflexive governance manifests in the processes underlying enhancing adaptive urban resilience in Rotterdam and The Hague is assessed. Thereby, this chapter answers the empirical sub-question regarding how reflexive governance for adaptive urban resilience takes shape in Rotterdam and The Hague during the corona crisis.

Concerning the resilience teams in Rotterdam and The Hague, it becomes clear how an ongoing self-critical evaluation is needed because their role in the municipalities is evolving rather than pre-defined. As new programs at the municipalities, they have to continuously reflect on their roles, specifically in the new situation of the corona crisis. Reflexive governance takes shape through learning-oriented arrangements with actors from different knowledge backgrounds regarding the boundary object of resilience. Social learning occurs in knowledge exchange with cities from the Resilient Cities Network concerning experiences with the multifaceted crisis impacts and strategies to build resilience into urban crisis response and recovery. Workshops and webinars flexibly respond to emerging needs, and cities exchange working methods in a manner of learning by doing.

Compared to its neighboring city, Rotterdam had showcased greater flexibility to activate processes of interdisciplinary knowledge exchange and production with the local knowledge institutions. Consequently, Rotterdam was leading the way regarding producing scientific knowledge on the societal impacts of the crisis at the beginning of the pandemic. In the *Knowledge and Inspiration Updates*, manifesting a form of reflexive thought leadership, international best practices are combined with expert interviews (D1-10). Thereby, strategic-level professionals across the municipality are encouraged to re-think their own practices in light of resilience principles. Next, critical discussions with local researchers frame processes of local governance as part of the problem structure. Additionally, by collaborating with partners from knowledge institutions, the resilience concept is employed as lens through which the own organization’s policies related to crisis recovery are critically analyzed. This way, underlying policy frameworks are made explicit, and conclusions from these self-critical analyses are translated into advice for policy-makers. Rotterdam’s resilience experts are critical about the extent to which recovery policies leverage changes in social and institutional systems in an explicit and structural manner and whether the idea of systemic transformation has remained limited to projects related to urban infrastructure and mobility. The new knowledge agenda, part of the resilience strategy under development, presents a strategy for reflexively responding to the new knowledge needs that have

emerged during the corona crisis. Therefore, it will revolve around questions such as the interplay of resilience and vulnerability in local neighborhoods and connections and overlaps between interventions related to the different domains of economy, society, and infrastructure.

Citizens' experiences are reflected in research on the crisis' impacts and interviews with selected actors from different sectors for the new strategy. Nevertheless, the voices and interests included in critical discussions seem overall limited to experts from the Resilient Cities Network or local knowledge institutions with an a priori interest in urban resilience. Further, respondents often refer to the resilience program as somewhat disconnected from local policy-making:

"(...) there's quite a difference between just concepts of resilience and international cases and really small problems that - for instance - the aldermen are facing".

-(Strategic Advisor, Central Management, Municipality of Rotterdam)

Thus, a gap between learning on the level of the resilience program and changes in actions, policies, and processes of the municipalities becomes apparent.

The Hague's resilience unit shows a strong focus on integrating more diverse types of knowledge into assessing the impacts of the crisis recovery by conducting interviews with societal actors and the plan for an open-ended process of formulating a long-term recovery strategy. This strategy seeks to combine quotidian, scientific, and political knowledge into a complex understanding of evolving challenges, their overlaps, and solutions to address these in integrated ways. It is explained that the strategy-making process aims at including stakeholders from different economic and societal sectors, actors from knowledge institutions, and representatives from different levels of government. The way in which focus areas of the strategy are not pre-defined makes clear that simple consensus regarding the contested objective of building resilience principles into an integrated long-term recovery are eschewed. Inclusive processes of collaborative problem and solution framing and open-ended learning seem to be a priority for The Hague's resilience program. Nevertheless, the challenges of progressing with the long-term recovery strategy indicate a lack of reflexive governance capacity. Moreover, the reflexive governance trade-off between opening up the problem space and the need to retain action capacity is illustrated by the criticism on the plan for the participatory strategy-making process by a respondent (Voß & Bornemann, 2011):

“I think that we should be able to focus already on what the themes should be: start discussing with the stakeholders on those themes. (...) Personally, I would have liked the process to be more focused, so we can move faster.”

- (Strategy Advisor, Urban Development, Municipality of The Hague)

The case of The Hague falls short of the reflexive governance ideal due to the lack of capacity to leverage lessons learned from discussions with civil society actors and researchers into the changing of dominant discourses, policy objectives, and governance practices across the municipality.

4.3 The Influence of Crisis Conditions on Reflexive Governance

This chapter analyzes how crisis-related factors influence the adoption of reflexive governance in The Hague and Rotterdam. Accordingly, the factors are either presented as boosts or barriers.

4.3.1 The Complexity and Scale of the Corona Crisis as Boost for Reflexive Governance

Interviewees in both Rotterdam and The Hague often refer to the complexity and scale of the corona crisis as a decisive factor for creating new knowledge needs. The unprecedented situation motivates resilience experts to learn from each other through the platform provided by the Resilient Cities Network about how to position themselves in the crisis management of their own cities. While this seemed to be a global question, resilience programs took on different functions in their local crisis organization based on their action capacities and expertise.

“Every city had the same questions (...), they had the same urgent feeling that they should have some kind of a role in the crisis sphere, but very much looking at: Okay, but we are not the crisis experts. So what does that mean for us?”

- (Deputy Resilience Officer, Resilient Rotterdam)

Besides, the uncertainty of the situation made it necessary to understand how mitigating measures influenced the course of the crisis elsewhere.

Next, understanding the crisis' impacts on the local communities became a priority. Hence, joint research projects between municipality and knowledge institutions in Rotterdam and The Hague focused specifically on citizens' subjective experiences during the crisis. Thus, the problem framing is

soon broadened from a health crisis and economic crisis to a social crisis. A respondent's impression of the changing knowledge needs of Rotterdam's resilience program illustrates this shift:

"I recognize that from the resilience team. They're (...) really trying to figure out what is the perspective for action (...) What can we do in order to build resilience? I think that before the COVID crisis, they were dealing with climate change, they were dealing with the international cooperation of Resilient Cities. So that that was their playing fields instead of the fine-grained social resilience in the city. And that has changed. And that is also, I think, changing their (...) knowledge needs."

-(Researcher and Coordinator, Science-Policy Interface Rotterdam)

Respondents in both cities emphasize that throughout the first weeks of the pandemic, it became increasingly clear how citizens with lower levels of health, income, and education are hit harder by the crisis' negative mental and financial consequences. Consequently, it is reported that the focus of discussions has moved increasingly to the social dimension of urban resilience. Respondents in Rotterdam argue that this shift in discussions brings forth heightened awareness to the social fabric of local communities as compared to previous work in the resilience context, focusing first and foremost on questions of climate adaptation. Attention is drawn to generic vulnerability factors like the lack of cultural, economic, physical, and social capital and new vulnerability patterns concerning unstable and flexible working conditions or young people in education. At the same time, cohesion, solidarity, trust, informal neighborhood networks, and efficient communication between municipality and neighborhood initiatives are framed as fundamental conditions for mitigating the negative crisis' impacts and recovering from the crisis in an inclusive way. Consequently, social resilience became central regarding the framing of problems and solutions in the face of the multidimensional crisis.

4.3.2 The Sense of Urgency as Boost for Reflexive Governance

Next, interview respondents from both Rotterdam and The Hague frequently refer to the corona crisis as spawning a sense of urgency, which is perceived to enable shorter lines of intra- as well as inter-organizational communication. This concerns the municipalities' interdisciplinary crisis teams, the international cooperation between cities, and the joint projects between knowledge institutions and municipalities.

"(...) sometimes it's difficult to work between different departments. But given the urgency of the crisis - it really accelerated the process."

- (Strategy Advisor, Municipality of The Hague)

Notably, it is reported how the sense of urgency has brought forth a shift in the approach of Rotterdam's resilience team. As a major systemic shock, the corona crisis has helped to make the often as abstract perceived concept of resilience more palpable at Rotterdam's municipality. Therefore, the focus of the resilience team has moved from explaining the need for resilience-thinking in urban governance to having to provide actionable advice on operationalizing adaptive resilience through the urban crisis recovery, as illustrated in the following quote:

"I think it took a lot of effort to not only talk about the theoretical basis of resilience, but really make it actionable. That was a difficult puzzle, especially in the beginning. So what do you mean with building back stronger? What kind of actions do we need, what kind of policy has to change?"

- (Strategist City Hall, Rotterdam)

Advice from local researchers on strengthening social resilience often encompasses the local government shifting towards a more facilitative role regarding community initiatives and enhancing trust and efficient communication with citizens. The immediacy of the crisis' socio-economic implications seems to also have brought forward a more critical stance concerning the relation between community networks and municipality.

4.3.3 The Focus on Long-Term Recovery and Transformation as Boost for Reflexive Governance

In both Rotterdam and The Hague, the resilience teams have decided to focus on promoting a focus on long-term recovery and transformation, beyond quick-fix solutions for immediate damages. Hence, to identify the needs and opportunities for transformative interventions and integrate strategies on addressing underlying socio-economic vulnerabilities with other focus points such as digitalization of the economy and climate adaptation, the Hague's resilience team plans to start the previously mentioned participatory strategy-making process (4.1.2). The long-term orientation of the strategy is treated as an opportunity for opening up the complexity of problem and solution framings:

“And we really would like to have it as a participatory process, so that we engage stakeholders in the city, but also knowledge institutions to really hear from the stakeholders what in their opinion are the chances for recovery and resilience in our city.”

- (Chief Resilience Officer, Resilient The Hague)

In Rotterdam, the question of how systemic, transformative interventions can become more concrete arises, as illustrated by the following quote:

“So it's long term, looking beyond the crisis and the recovery phase, try to already see what kind of things you need to organize in order to become better and stronger. And that's a very powerful metaphor that we that the resilience program has (...). But it's also kind of vague, right? It doesn't really say what to do. (...) So, we really focused on what does build back better look like in our international network”.

- (Deputy Resilience Officer, Resilient Rotterdam)

This question motivates an interest in learning from the best practices from other cities. However, a major difficulty for Rotterdam's resilience team is to render social transformations concrete and actionable in the local urban and institutional context, possibly because this presents a new thematic playing field.

4.3.4 Municipalities' Resource Focus on Immediate Crisis Response as Barrier for Reflexive Governance

In both cities, respondents refer to the municipalities' preoccupation with the immediate crisis impacts and direct response to these as a barrier to reflexive governance.

In the case of The Hague's resilience unit, the lack of organizational support presents a major challenge for starting the process of drawing up the long-term recovery because the opportunities for collaborative problem and solution framing with stakeholders from different municipal departments are impeded. Participation of internal stakeholders, who are heavily engaged with the immediate crisis response, was considered key to ensure relevance and uptake of integrated strategic actions. This decreases the speed of the strategy-making process considerably, as illustrated in the following:

“But I think what we were looking into was really more the longer term recovery. And that’s the process that we are going to start right now. And it took longer than we expected. But that was also because many people that we needed to be engaged and involved were very intensely working on the more shorter-term recovery.”

-(Chief Resilience Officer, Resilient The Hague)

Also, in Rotterdam, the municipalities’ resource focus on the immediate crisis response is addressed by respondents. Nevertheless, it is not framed as a significant barrier to drafting a new resilience strategy, which integrates lessons learned during the corona crisis, possibly because the process relies less on the participation of internal stakeholders.

However, it becomes evident that during the recovery phase(s), when actors in the municipality increasingly resume their regular tasks, there seems to be a heightened interest in the lessons learned:

“(…) one of the things we learned is that on the height of a crisis or a lockdown, it’s very difficult to start a discussion or to make an implementation for resilience or long-term measures. (…) So at the end of a lockdown (…) then suddenly there’s an interest in ‘Okay, what did this lockdown do to us? And how should we look at the new situation?’”

-(Strategic Advisor, Central Management, Municipality of Rotterdam)

4. 4 The Influence of Governance Network Attributes on Reflexive Governance

This chapter analyzes the most essential governance attributes and their influence on the adoption of reflexive governance during the crisis, resulting in their presentation as either boosts or barriers.

4.4.1 Existing Networks as Boosts for Reflexive Governance

Networks with actors from different knowledge and practice backgrounds appear key for enabling reflexive processes regarding both case studies. Relevant networks in this regard are international city networks as well as the local knowledge infrastructure.

As members of the Resilient Cities Network, Rotterdam and The Hague have close relationships with international cities, which let knowledge exchange be intensified more easily during the crisis. Respondents explain how this international infrastructure has been vital for exchanging inspiration,

experience, knowledge, and best practices concerning the shared objective of building back better from the crisis. In Rotterdam, learning from other cities' about the complex and evolving impacts of the crisis and the effects of mitigation policies is regarded as valuable information for crisis-related decision-making, as illustrated in the following quote:

"We thought, what is the unit within Rotterdam, which has the best international contacts, and which has the best infrastructure in order to get to many more cities - instead of finding out everything yourself? (...) That's the short road to international collaboration. Because this exists already. We're not going to set up anything new. (...) You must act as quick as possible!"

-(Director Crisis Impact and Response Team, Municipality of Rotterdam)

Second, the role of local networks with knowledge institutions and research organizations is frequently emphasized throughout the interviews. The local knowledge infrastructure has matured further in Rotterdam as compared to its neighboring city. In Rotterdam, several science-policy interfaces for different research fields have been developed over a period of many years. Interviewees refer to the ongoing efforts in connecting Rotterdam's multiple science-policy faces and stimulating the knowledge exchange between policy-makers and researchers through workshops and seminars. A research initiative focused on questions of urban resilience, sustainability, and justice at Erasmus University Rotterdam contributed to the *Knowledge and Inspiration Updates* through policy briefs on the conditions for the resilience of citizens and communities and the role of local government in facilitating it. Further, it was collaborated with Rotterdam's resilience team to critically analyze the city's crisis response in light of the resilience concept. Next, the multiple research reports by a policy-science interface concerned with the well-being in Rotterdam's neighborhoods revealed citizens' subjective experiences of the crisis and the dynamics of social cohesion, solidarity, and self-organized neighborhood initiatives. Furthermore, a research platform dealing with socio-spatial developments in Rotterdam was conducting research on the pilot "resilient neighborhood," which could quickly be scaled up to assess the dynamics of informal community networks during the lockdowns as a source for community resilience.

Recommendations based on these researches were jointly developed by matching emerging insights with the municipality's knowledge needs. Respondents refer to Rotterdam's knowledge infrastructure as decisive for quickly obtaining the relevant knowledge on the social dimensions of the evolving crisis, as elaborated in the following quote:

“So we had a lot of questions. And luckily, we had this infrastructure with the Kenniswerkplaats. And so we could quickly have the good people on the table. So, the researchers and the people from this municipality (...), we had a tradition to talk about the problems we should research.”

- (Coordinating Strategy Advisor Social Affairs, Municipality Rotterdam)

In The Hague, previous interactions between municipality and knowledge institutions have been occasional. However, the new Center of Expertise Governance of Urban Transitions of The Hague’s University, which focuses on practice-oriented research on social issues and new forms of governance, joined the research initiated by Rotterdam’s science-policy interface soon, extending the project into an inter-city collaboration:

“(...) it went pretty quick, in the end, to make some funds available to join Rotterdam in this project. It kind of helps us - Sometimes it's good that cities look at each other, and think oh, well, if they're doing it, we will join. Rotterdam seems to be faster in initiating new programs – that’s ok.”

-(Strategy Advisor, Urban Development, Municipality of The Hague

As a result of the crisis experience, actors in The Hague stress the need for arranging more structuralized policy-science collaborations to allow for better flexibility in the scenario of future disruptions that bring forth new knowledge needs:

“(...) that's also a switch that we're trying to make. (...) We're really trying to be much more closely connected to the policy cycle and to the themes that are really important for the city.”

-(Director of Centre of Expertise Governance of Urban Transitions, The Hague University)

4.4.2 Trust between Actors as Boost for Reflexive Governance

Trust is frequently referred to as a vital enabling factor for interdisciplinary learning. Most prominently, the theme of trust is discussed regarding the relationship between actors science and policy domains in Rotterdam. Strong trust between actors from these domains is often described to be a consequence of previous collaborations.

Interviewees frame trust as a vital coordination mechanism for generating insights on politically sensitive topics like citizens’ declining confidence in politics throughout the pandemic. Trust presents a

pre-condition for discussing solutions to facilitate community resilience or rebuild citizens' confidence, which requires challenging prevalent governance approaches. Further, the sense of urgency necessitates actors to take a leap of faith because they start collaborating before finalizing formal contracts in the face of the crisis's urgency.

"(...) A lot of people have seen the importance of having a knowledge infrastructure or having some kind of network, where we can interact with each other, where we know each other, where we trust each other, where we speak the same language (...)."

- (Research and Knowledge Coordinator, Municipality of Rotterdam)

In the interviews with actors in The Hague, trust was solely framed as a possible result of the joint efforts between knowledge institutions and municipality during the pandemic. This is elaborated by an interviewee when referring to the collaborative research projects between municipality and knowledge institutions:

"And it proves the point to the city of the Hague, that we could do something like this. So, it's really helpful in establishing better relations."

-(Director of Centre of Expertise Urban Transitions, The Hague University)

Hence, the findings imply that trust is a result of mutual learning and knowledge production between science and policy domains.

4.4.3 Connecting Actors as Boost for Reflexive Governance

Throughout the different interviews, it is often referred to the importance of connecting key individuals. These connecting actors can be identified in various roles and positions. In Rotterdam and The Hague, they operate at the interface of policy and science at both knowledge institutions and municipalities, promoting frameworks for interdisciplinary knowledge production and learning.

Instead of necessarily having designated networking functions, connecting key individuals distinguish themselves through the capacity to mobilize their networks in line with a visionary perspective. In the face of the urgency of the crisis, they were willing to initiate and speed up collaborative processes between the municipality and knowledge institutions. Their familiarity with the workings and personal contacts at the other domain allows them to mobilize networks swiftly.

Moreover, in the case of Rotterdam, connecting individuals also appear to more indirectly boost interdisciplinary learning by having contributed to establishing the city's distinct knowledge infrastructure and spanning the boundary between the city council and the university. Thus, by creating settings for reflection such as workshops about the knowledge transfer between science and policy, connecting individuals have created the relevant framework conditions that facilitate flexible collaboration during the crisis.

"I had no active role during the corona pandemic. But partly because of my work before that, because there was a foundation of a knowledge infrastructure, those people could interact with each other faster and more flexibly."

- (Research and Knowledge Coordinator, Municipality of Rotterdam)

At the same time, it becomes clear how, in The Hague, connecting individuals are indispensable for enabling integrated knowledge production between science and policy domains during the crisis. This is elaborated by one respondent when referring to the organization of joint research projects:

"(...) but it also usually revolves on the personal contact someone has at these institutions. (...) We're looking into how we can maybe make it more official."

-(Strategy Advisor, Municipality of The Hague)

Consequently, The Hague's lack of a solid pre-existing knowledge infrastructure appears to make connecting individuals even more critical for initiating reflexive processes in the face of the urgency of the crisis.

4.4.4 Political Cycles and Agendas as Barrier to Reflexive Governance

Regarding both Rotterdam and The Hague, interviewees frequently address political agendas and cycles as barriers to taking on a perspective on long-term changes based on a re-consideration of underlying problems and societal ends. In both cities, the overarching strategic focus on a short- to medium-recovery was explained by two reasons: the complexity of the corona crisis and interventions on multiple levels of government rendering future impacts and developments uncertain and the cycles of local politics. How political dynamics can challenge translating lessons learned from the novel situation

into concrete policies is explained by one respondent when referring to the research projects on the pandemic's socio-economic implications:

"we do this as, as a municipality, not only to gain knowledge or publications, but to really apply the knowledge and get the knowledge into action policy. And this is quite an ongoing struggle for us, because you have the political dynamics, you have all the different interests of the different departments of the municipality."

- (Strategist City Hall, Rotterdam)

Regarding The Hague's plan to draw up a long-term recovery strategy, this leads to a trade-off between translating long-term visions into concrete plans and actions and not interfering with changing political agendas:

"As it is with long term views, if you translate them into short-term measurements, the process can become more complicated as decisions and priorities need to be taken, and these can become more political."

-(Chief Resilience Officer, Resilient The Hague)

4.4.5 Organizational Culture as Barrier to Reflexive Governance

Next, the organizational culture of The Hague's and Rotterdam's municipality presents a key barrier to critically challenging underlying assumptions and practices and connect emerging insights to changes in dominant discourses and governance practices. Promoting a focus on integrating responses to various challenges during the crisis recovery seems hindered by the compartmentalized structures of the municipalities:

"I think one of the challenges we have is to see that resilience program became sort of a niche or one of the various focus points of Rotterdam, whereas it should be just the central idea or concept for the city as a whole."

-(Strategic Advisor, Central Management, Municipality of Rotterdam)

It is striking that in Rotterdam, critical discussions seem to occur in the absence of policy-makers, rendering reflexive processes of reframing problems and re-considering solutions isolated from the policy sphere. Furthermore, respondents argue organizational culture to be characterized by the

reluctance to share data across different departments in Rotterdam’s municipality, which challenged integrated crisis impact assessments of emerging problems at the outset of the crisis.

Another aspect in which the organizational culture of the municipalities appears to be in tension with reflexive governance is the common tendency to go back to “business as usual” after the crisis instead of, for instance, further developing inter-departmental collaboration. Moreover, emerging lessons about the facilitation of community resilience imply transforming arrangements for knowledge sharing between neighborhood networks and municipalities and rendering recovery strategies and policies more participatory and tailor-made. Still, respondents argue that the organizational culture of the municipalities is not responsive and flexible enough to absorb these emerging lessons during the recovery phase:

“But the lessons we learned during the crisis should help us after the crisis, too. And I think that’s the big challenge because people are back to business as usual.”

- (Coordinating Strategy Advisor Social Affairs, Municipality Rotterdam)

4.5 Visualizing the Findings

Figure 2 visualizes the empirical findings of this research. The relevant crisis-specific conditions are visualized on the left, and the governance network attributes on the right. These two sets of factors are each divided into boosts (in green) and barriers (in red) regarding the adoption of reflexive governance for adaptive urban resilience.

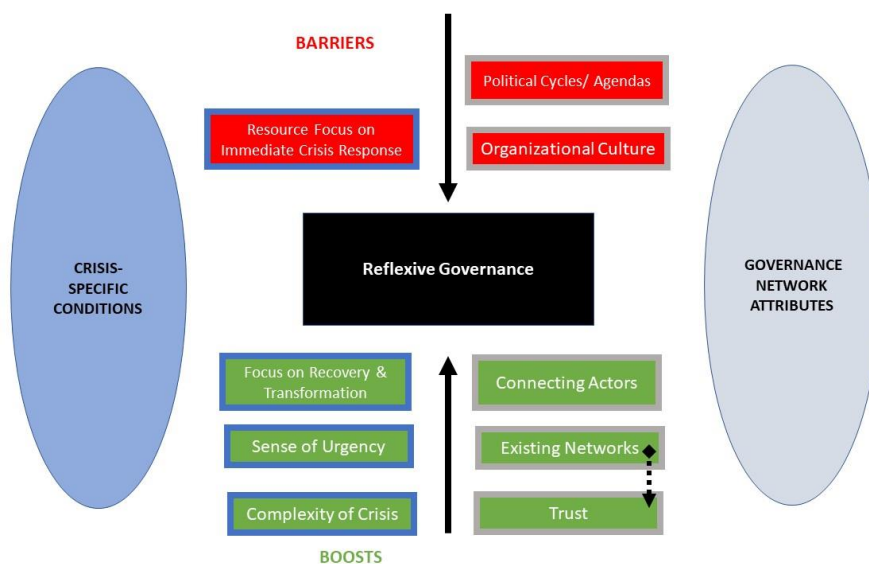


Figure 2 Visualization of Empirical Findings

4.6. Cross-Case Analysis

In the previous sections, I already pointed out the differences in the governance settings between the two case studies. This chapter will go more in-depth regarding the comparison of the case studies. Thereby, it will answer the empirical sub-questions of how governance and crisis factors interact and how variations in the governance networks between Rotterdam and The Hague explain the differences in the reflexive governance processes adopted during the corona crisis.

Before turning to the differences between the two cases, it is worth considering their similarities. As expected, the corona crisis plays out in similar ways across the two neighboring cities in terms of perceptions of heightened problem complexity, an increased sense of urgency for action, and an overarching organizational focus on crisis mitigation and short-term recovery measures. These crisis conditions coincide with resilience programs in Rotterdam and The Hague, which have been established at the municipalities only throughout the past few years and consist of relatively few team members. Due to these circumstances, the two cities' resilience programs are not involved in immediate crisis management. Instead, they focus on translating lessons learned from the corona crisis into strategies on enhancing resilience with a long-term orientation. Furthermore, strong ties to cities from the Resilient Cities Network facilitate an alternative perspective on crisis recovery. Thus, it becomes clear how the internationally-oriented role and the newcomer position at the own organization benefits a focus on promoting adaptive resilience, which manifests in efforts to treating the COVID-19 pandemic as an opportunity for systemic changes and addressing overlapping crises. In this sense, the international networks facilitate a learning-oriented and reflective approach to enhancing resilience in the long run.

At the same time, the same positions as important and valued outsiders at the municipalities that enables a reflective perspective on crisis recovery also presents a challenge for Rotterdam's and The Hague's resilience teams. The two teams face similar problems regarding the access to internal networks regarding different municipality departments and policy-makers during the corona crisis. Some respondents explain this with reference to the municipalities' complex and departmentalized organizational structures. Further, respondents argue that changing political cycles and the relative inflexibility of organizational cultures hamper long-term planning based on re-considering processes and goals during the crisis. Thus, in both cities, a struggle to involve different departments and policy-makers in reflexive processes during the crisis becomes evident, which leads to a lack of change agency and seems to result in delays in strategies.

A core difference between the two cities is the maturity of Rotterdam's distinct knowledge infrastructure, with Erasmus University as a key player. This local academic network seems to have led to a slightly faster, more responsive process of integrated knowledge production and joint learning between knowledge institutions and Rotterdam's municipality. In addition, a longer history of science and policy collaboration in Rotterdam has contributed to high levels of inter-organizational trust. This finding is supported by the argument that trust is often the result of the success of previous collaborations between organizations (Williams, 2002). Connecting actors seems to become even more critical when infrastructures for knowledge exchange are not well-developed.

As a consequence of strong inter-organizational ties, it appears that discussions in Rotterdam about enhancing resilience during the crisis are more self-critical. Next to re-evaluations of underlying problems and possible solutions, they also address governance processes and the municipality's organizational structures as part of the problem. This finding is backed up by the argument that trust in the governance network stimulates actors to "openly express to others their underlying assumptions, motives, and commitments," so that processes and assumptions can be challenged on the basis of "openness and humility" (Chilvers, 2012: 300). Rotterdam's more self-critical approach manifests in the plan for a new resilience strategy that seeks to capture lessons from the corona crisis as well as resilience program's evolving role, which shifts increasingly towards organizing learning based on a process-based understanding of resilience. In addition, strong ties with external partners from knowledge institutions, who are more easily accessible because of the existing knowledge infrastructure, benefit the interactive strategy-making process during the crisis. Nevertheless, not actively involving internal stakeholders in the process implies that the strategy might remain isolated from policy-making within the own organization, making it challenging to build a "winning coalition" around proposals and "enhance political feasibility" (Bryson, 2004: pp.25).

In contrast, weaker external networks for knowledge exchange in The Hague's resilience context seem to lead to greater dependency on internal stakeholders to plan a participatory strategy-making process, which presents a challenge considering the organization's resource focus on immediate crisis response. Consequently, The Hague's municipality currently considers developing infrastructures for knowledge exchange with external partners, for instance, through a new knowledge infrastructure between university and municipality to allow for better flexibility and responsiveness in the face of future disruptions requiring new knowledge.

4.7 Visualizing the Findings: The Interplay of Factors

This figure visualizes the interplay of factors observed in the empirical data, granting more nuance to the findings. Hence, the table draws attention to how the organization's preoccupation with immediate crisis response, the municipalities' organizational cultures, and political cycles are in tension with the long-term orientation of recovery and resilience strategies. Further, the sense of urgency reinforces the need for connecting individuals to set up processes of reflexive governance. Besides, connecting individuals are responsible for establishing networks for interdisciplinary knowledge exchange and learning, through which trust between actors from different domains is developed.

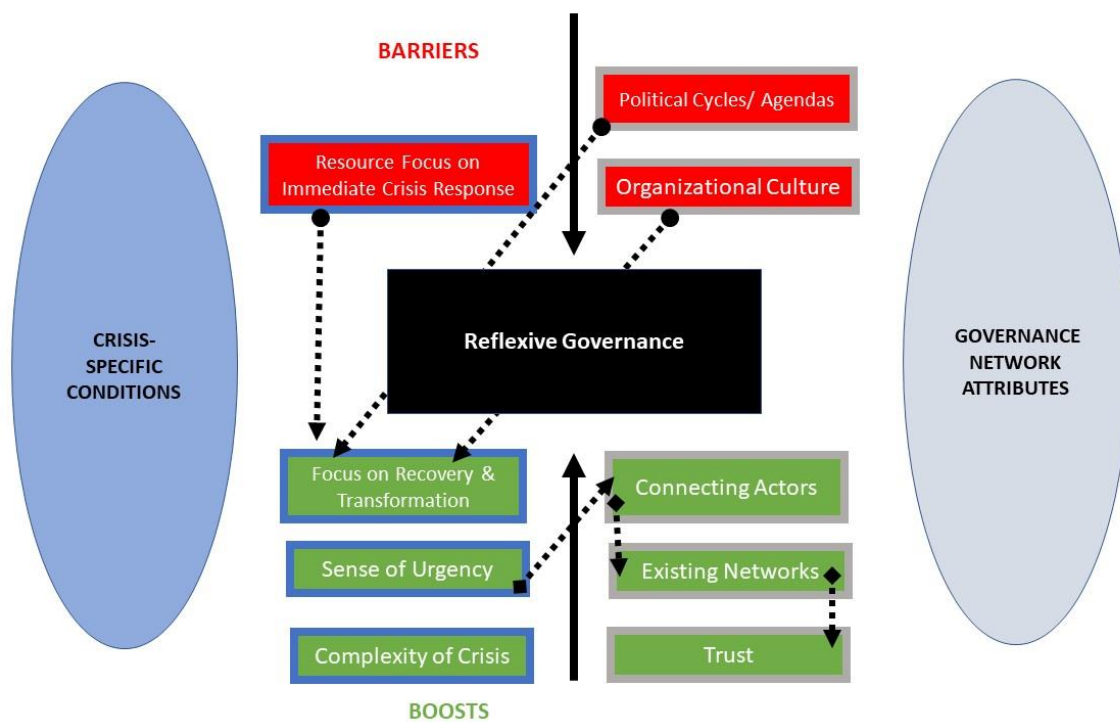


Figure 3 Visualization of Empirical Findings: The Interplay of Factors

5. Theoretical Reflections

This chapter relates the empirical findings of this research to the theoretical framework. This research also generated conceptual links that have not been accounted for in the theoretical framework. New literature will be added to give more context to these findings. First, the chapter discusses the relevance of the concept of reflexive governance for adaptive urban resilience, in which the research was embedded. Second, it will be concentrated on the relevance of governance network attributes and the conditions created by the corona crisis in influencing the adoption of reflexive governance processes in the urban resilience context. Finally, based on this discussion, an enriched conceptual model will be presented.

5.1 Linking Reflexive Governance and Adaptive Urban Resilience

This study first considered the relevance of the reflexive governance concept for enhancing adaptive urban resilience in the aftermath of an integrated crisis. As McNutt and Rayner (2018) have pointed out, empirical research on reflexive governance has remained scarce because much policy-making is un-reflexive in practice. This study has affirmed that enhancing adaptive urban resilience goes in line with an open-ended and learning-based approach to governing, which can take into account the ambiguity of the concept and its dynamic and multidisciplinary nature (Sharifi & Yagamata, 2018; Duijnhoven & Neef, 2016). An adaptive framework is adopted by focusing on long-term recovery and transformation, which the resilience teams of The Hague and Rotterdam have claimed as their niche during the corona crisis. It becomes clear how enhancing adaptive resilience forms a complex boundary object that connects different actors through learning. In this sense, Huck et al.'s (2020: 195) argument that “resilience can serve as a boundary concept bridging different epistemic divides and creating identity to structure common practices across different communities of knowledge production” is underscored.

It was demonstrated that processes of interdisciplinary learning and knowledge generation are central mechanisms for assessing the crisis's cross-boundary impacts and the underlying systemic vulnerabilities and strengths that have reinforced or mitigated them. Notably, this research has shown how the social dimension of resilience became a major concern during the corona crisis. The shift to questions of social resilience can be explained by the key role that social capital plays in shaping the course of crises and recoveries (Carpenter et al., 2012). Further, the current pandemic is no exception in hitting “people at the bottom of the socio-economic spectrum disproportionately” and has exposed generic vulnerabilities “in a new light” (Acuto, 2020a: 748). Reflexive governance brings forth a broadening of the discussions on urban resilience beyond climate adaptation. Discussions on community resilience during the corona crisis counterweigh the general physical science bias in urban risk

management (Pelling, 2003). At the same time, challenges arise from the difficult-to-operationalize nature of social resilience as well as social and institutional transformations presenting slower, longer-term, and less visible processes than engineering responses (Voß & Kemp, 2005; Pelling, 2003).

5.2 The Relationship between Crisis Conditions, Governance Network Attributes, and Reflexive Governance

This research has added a crisis link to the reflexive governance theory. It has shown how the evolving cross-boundary dynamics of the corona crisis both triggered and challenged reflexive governance. The corona crisis is perceived as an opportunity for transformative change (Acuto, 2020a) that generates a heightened sense of urgency and new knowledge needs due to increased complexity. However, this study has also shown how reflexive governance is challenged when most organizational resources are directed at the management of the crisis and its immediate impacts. Reflexive governance is a matter of degree rather than kind. Accordingly, the question arises of how much reflexive governance can be expected during the crisis, and a critical reminder to “not get carried away with an ideal construct of reflexivity that makes almost impossible demands on societal institutions” (Meadowcroft & Steurer, 2018: 748).

The role of both local (Dzigbede et al., 2020) and international networks (McGuirk et al., 2020) in providing discursive spaces during the crisis has been underscored. This local-global dynamic of reflexive governance for adaptive urban resilience reflects the pandemic’s complex interplay with the urban context. Whereas international networks are vital for inspiration, local networks are critical for generating knowledge on how crisis impacts take shape locally. This study highlighted the gap between social learning in international networks and translating the knowledge gained into local strategies and policies that “focus on transforming systems that are inequitable or hinder individuals or communities from developing adaptive capacity” (Meerow et al., 2016: 45). Therefore, next to underscoring the importance of cross-city exchange of experiences during the global crisis (Acuto & Leffel, 2020), this study also highlights the context-specific nature of urban resilience requiring strategies for contextualizing knowledge gained in international networks. Furthermore, the tension between the need to establish resilience as a guiding concept for crisis response, recovery, and adjacent transformation across the organizations and the nichification of the resilience programs has been identified, underlining the need for coordinating resilience-oriented decision-making across the different directions of the municipalities (Huck et al., 2020).

Moreover, this study has contributed to the ambivalent discussion on the strength of ties between actors conducive to reflexiveness. In line with previously voiced arguments (Newig et al., 2010; McNutt & Rayner, 2018), this research has shown how strong ties between actors from different knowledge and practice backgrounds on local and international scales facilitate open and (self-)critical discussions. The immediacy of the crisis reinforces the role of inter-organizational trust as an essential coordination mechanism for knowledge exchange (Williams, 2002) and integrated knowledge production. Nonetheless, in Rotterdam and The Hague, learning occurs mainly between experts with a priori interest in urban resilience, limiting the reflexive governance potential of including a broader range of perspectives into discussions and obtaining relevant tacit knowledge about the very heteronomous aspects of urban systems to be transformed. Complementary to strong ties for cocreation, weak tie relationships with more diverse local actors are arguably necessary for identifying complex problem interlinkages regarding overlaps between the corona crisis and other urban challenges (Markaard and Rosebloom, 2020) and enhancing social, economic, institutional, and physical resilience in consideration of a broad range of potential hazards that might be quite unlike the current crisis (Pelling, 2003).

Notably, while this research focused on how crisis-related and governance network factors influence the adoption of reflexive governance, the results imply a more dynamic two-folded relationship. It has been demonstrated how interdisciplinary learning and knowledge production stimulate inter-organizational trust or lead to the re-assessing of the roles of resilience experts during the crisis. Nonetheless, for social learning to be effective, it should also generate more tangible outcomes like institutional adaptation and the shifting of policy objectives (Sol et al., 2017; Voß & Kemp, 2005). Accordingly, this research shows that the lack of such change agency (Sol et al., 2017) leads to difficulties for the resilience programs to leverage lessons learned from the crisis. Further, the results of this study imply that municipalities' bureaucratic and complex organizational design presents a burden to the reflexive adaptation of processes and procedures inherent to reflexive governance (Cunliffe & Jun, 2005). Also, the tension between local politics and reflexive governance is reflected in the findings of this research. Yet, it does not result from the openness of reflexive governance and the closedness of political preferences, as Hendriks and Grin (2007) suggest. Instead, the tension here lies in transformative social and institutional change as a pathway to resilient crisis recoveries, on the one hand, and the cycles of local politics and changing political agendas, on the other hand.

Further, this study has added a new dimension to reflexive governance theory by identifying the central role of connecting individuals, in the literature referred to as "boundary-spanners," in providing

the framework conditions for and initiating processes of reflexive governance. Whereas boundary-spanners have thus far not gained attention in the literature on reflexive governance, they have been found to enhance trust and performance in governance networks more broadly. Being defined as “organizational members who are able to link the organization they represent with its environment” (van Meerkerk & Edelenbos, 2014:3), boundary-spanners are associated with creating bridging social capital through establishing inter- and intra-organizational connections owing to their attunement with “contextual information on both sides of the boundary” (Tushman & Scanlan, 1981: 291-2, in Meerkerk & Edelenbos, 2014). Boundary-spanners translate information and disseminate knowledge across boundaries (van Meerkerk & Edelenbos 2014; Willimas, 2002). This study adds to existing theory by linking the concept of the boundary-spanner to the capacity of enabling a distinctly learning-based mode of governance and meaningful exchange between the “separate worlds of policy and science” (Meadowcroft & Steurer, 2018: 737) in the face of urgency, uncertainty, and new knowledge needs. Therefore, as a specific actor in the governance network, the boundary-spanner enriches the conceptual model by a new dimension.

5.3 Enriched Conceptual Model

In line with the results and theoretical discussions, the enriched conceptual model is presented below. Concerning the governance network, this research identified trust, boundary spanners, and existing infrastructures for knowledge exchange as central factors determining reflexive governance next to political dynamics and organizational culture. Further, alongside urgency for action and the increased problem complexity during the corona crisis, the municipalities’ resource focus on immediate crisis response and the resilience programs’ emphasis on longer-term recovery and transformation are important conditions to trigger and challenge reflexive governance processes. These specific governance network attributes and crisis conditions replace the more general factors included in the initial conceptual model. Moreover, that reflexive governance can, in turn, determine the governance network structure or crisis conditions, such as the focus on immediate response or transformation is indicated through the arrows pointing from right to left. While this study has identified specific relationships, it is expected that there are numerous alternative ways in which conditions created by this or other crises and these governance network attributes can generate new knowledge needs and stimulate learning, and how learning outcomes lead to a re-organization of the governance objectives and structures. As the specific causalities between the factors pertain to the peculiarities of the case studies, the

relationships between factors in the updated conceptual model are not assessed as boosts or barriers per se.

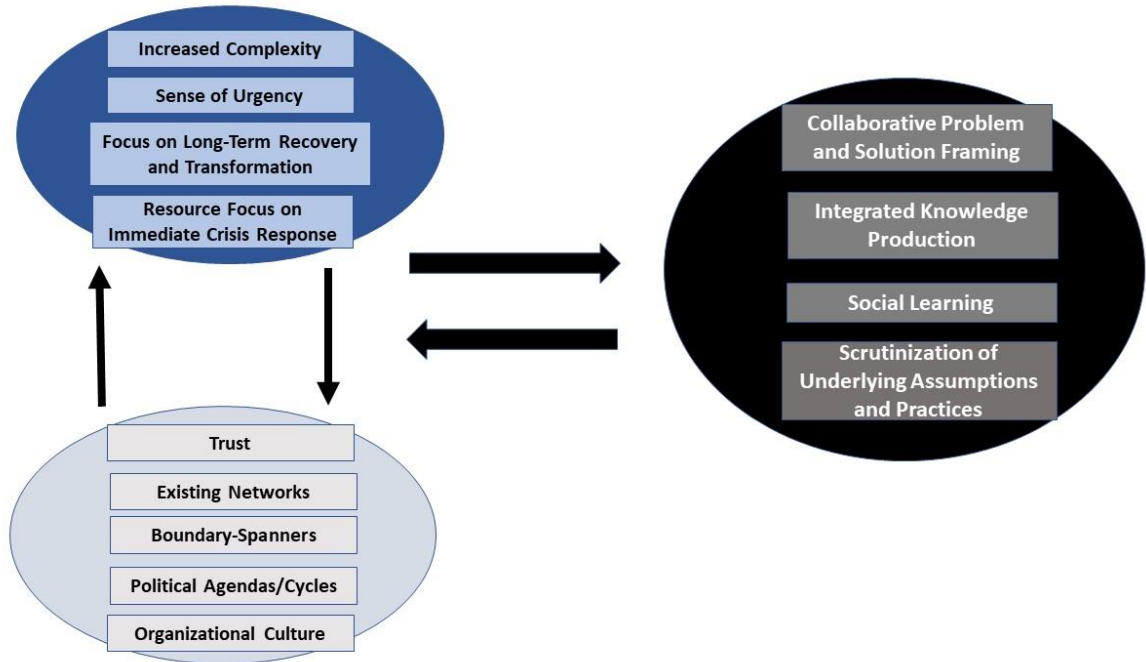


Figure 4 Enriched Conceptual Model

6. Conclusion

This chapter draws conclusions based upon the results of this research and discusses their implications.

First, the central research question will be answered by summarizing the most important results.

Followingly, the implications for theory will be elaborated before addressing the limitations of this study in connection with recommendations for future research. Finally, this master's thesis will end with practical recommendations.

6.1 Conclusion

This thesis sought to contribute to an understanding of how governance network attributes and crisis-specific conditions hinder or boost the adoption of reflexive governance for enhancing adaptive urban resilience. To this end, the central research question was formulated as follows: *“How does the interplay of governance network attributes and crisis-specific conditions influence the adoption of reflexive governance for adaptive urban resilience during the corona crisis in Rotterdam and The Hague?”* For answering this research question, a multiple case study was conducted. Thus, 18 in-depth interviews with actors from different knowledge and practice backgrounds related to the governance objective of urban resilience and the resilience programs in Rotterdam and The Hague were held.

In short, this research has demonstrated that conditions created by the crisis like the sense of urgency, the organization's overarching focus on the immediate crisis response, and the focus on the long-term recovery taken on by the resilience units in The Hague and Rotterdam, as well as the increased complexity in the governance environment, influence the adoption of reflexive governance. Next, certain attributes of the governance network have been shown to play an important role in this regard. Namely, high levels of trust between the actors from different knowledge and practice backgrounds, existing networks that have been cultivated before the crisis, the organizational culture of the municipalities of which the resilience teams are part, and the cycles of local politics. The research has demonstrated how governance-related and crisis-specific factors interact. Further, it has shown how crisis-specific and governance network-related factors hinder or boost the reflexive governance processes of social learning, collaborative problem and solution framing, integrated knowledge production, and the scrutinization of underlying assumptions and practices. A visualization of how these relationships have played out is presented in chapter 4.4. The enriched conceptual model is visualized in chapter 5.4.

6.2 Implications for Theory

This qualitative research presents one of the very few empirical contributions to reflexive governance. The enabling and impeding conditions for reflexive governance on the urban scale have thus far not been subject to empirical research. At the same time, also theoretical insights in this respect have been scarce (McNutt & Rainer, 2018). Accordingly, the insights generated by this research contribute to the theory by highlighting that reflexive governance does not happen in isolation but is constrained or encouraged by certain attributes of the governance network in which it occurs as well as the external conditions related to the specific situation of the corona crisis. Hence, this study has provided insight into how an interplay of crisis conditions and governance network attributes challenge or stimulate reflexive governance on the urban scale. Important implications for theory is a better understanding of how conditions generated by a complex crisis can trigger and pressure reflexive governance, which has far not been accounted for in the literature. Next, this study has added to theory by first establishing a relevant conceptual link between reflexive governance and boundary-spanning actors.

Furthermore, embedding this study in a crisis context has demonstrated the relevance of the reflexive governance concept for translating emerging insights from the developing crisis into strategies and plans for resilient recoveries. Thereby, the applicability of reflexive governance as an analytical concept in relation to the governance objective of adaptive urban resilience has been demonstrated. The findings of this research imply that reflexive governance is integral to an understanding of resilience based on adaptation and transformation as mechanisms to thrive on- and prepare for shocks.

Lastly, this study has provided the first evidence on the roles and workings of designated resilience programs at municipalities in the face of an acute large-scale crisis. Currently, 97 cities worldwide are members of the Resilient Cities Network (Resilient Cities Network, 2020c). The resilience concept continues to gain relevance in urban policy practice, especially in light of the ongoing pandemic. By revealing the multiple tensions regarding connecting city-to-city learning during the crisis to urban recovery strategies and public action, this study has contributed to a better understanding of resilience-oriented decision-making on the urban scale. The lack of change agency and institutional adaptability has been identified as a central challenge to moving from the *governance of resilience* to *resilient governance*.

6.3 Limitations and Recommendations for Future Research

Initially, this research was designed to investigate how reflexive governance influences resilience and long-term recovery strategies under development in The Hague and Rotterdam during the corona crisis. However, in spring 2020, these strategies were not developed far enough to investigate actual changes concerning the different elements of the new and adapted strategies. To better understand how reflexive governance leads to a reconsideration of the governance objective or re-organization of the governance setting, follow-up research should investigate this linkage more closely once strategies are formalized. Researching these emerging changes from a longer-term perspective would also be beneficial for further exploring the reciprocity of governance setting and reflexive processes. In this sense, it would be relevant to investigate whether new actors have been included or new infrastructures for knowledge exchange developed. The envisaged introduction of new partnerships between knowledge institutions and the municipality in The Hague in the aftermath of the crisis would be an example of how reflexive governance can change the knowledge network or even collective institutions (Newig et al., 2020).

Additionally, due to the qualitative nature of this study based on in-depth interviews, results rely upon actors' accounts and subjective experiences. However, this bias has been counterweighted through the triangulation of perspectives (see chapter 3.2.2). Also, it should be noted that qualitative interviews, even when held online, proved a suitable means for answering the research question. While the digital interviewing format might eliminate non-verbal cues and time scheduling tends to be tighter, this methodology allowed for an efficient data collection process across the two cities.

Further, results cannot be generalized to different contexts. Regarding other governance objectives than adaptive resilience, other levels of governance than the urban, other cultural and geographical contexts or other events and crises, different factors might become more prevalent and affect the reflexiveness of governance in different ways. Therefore, more case studies should be conducted to further develop the evidence on reflexive governance during crises. Another relevant perspective on this phenomenon would be to analyze reflexive governance across different crisis phases. Reflexive governance seems to be streamlined during the recovery phase and impeded during the preceding response phase. This appears to be a fruitful conceptual link to be further explored.

Moreover, this research discovered the vital role of boundary-spanners for reflexive governance. This makes up for a novel and relevant connection between previously unrelated concepts. This relationship deserves more attention as it promises interesting and relevant insights into the role of individuals for enabling reflexivity and generating resilience in governance systems while adding onto

the literature on the different capacities and functions boundary-spanners can assume in public governance.

Finally, in this research, existing networks and strong ties between actors from different knowledge and practice backgrounds have been identified as key conditions for enabling reflexive governance during the corona crisis. At the same time, this leads to a very bounded form of reflexive governance, involving actors with a priori interest in resilience rather than giving a voice to “mainstream perspectives.” Therefore, the tension between weak tie relationships that allow for spontaneous learning and including a wider range of perspectives and interests and strong ties for promoting open, continuous learning based on mutual confiding needs to be further investigated in the context of urban resilience.

6.4 Practical Recommendations

This master’s thesis has shown how certain governance network attributes are conducive to reflexive governance. These insights lead up to practical advice regarding the design of governance settings that facilitate reflexivity during a moment of disruption when harnessing lessons learned is at the same time important and challenging.

One of the key enablers this thesis has shed light on is the importance of existing knowledge infrastructures fostering knowledge exchange and collective learning between actors from different domains on a structural basis. Creating bridging social capital and enhancing trust translates into better flexibility and responsiveness during a crisis when alternative understandings of problems and solutions are particularly sought to understand emerging problem-combinations, their connections to systemic vulnerabilities, and how to address these in integrated ways.

Rotterdam and The Hague are the first Dutch cities that are members of the Resilient Cities Network. This research has shown the benefit of cultivating inter-city relationships. Such networks allow for flexible learning from other cities’ experiences during crises through direct lines of communication. This supports learning about best practices in an international context, which is likely to remain relevant as cities increasingly deal with global challenges.

However, considering the challenge of contextualizing knowledge gained in inter-city networks and the increasing emphasis on social resilience, community engagement in learning processes becomes particularly important to better integrate the local context into the development of solutions. Accordingly, next to international networks, local networks with civil society actors from different communities and practice backgrounds are vital to informing urban resilience and recovery strategies

with tacit knowledge. Next, to guarantee more change agency and governance capacity for resilience programs, strong networks with actors from different departments of the municipalities are important. This way, resilience strategies can become more sensitive to the different perspectives, discourses, and interests present in the organization, and adaptive urban resilience can be more effectively employed as an integrated higher-level strategic orientation during crisis recovery.

This study has drawn attention to the central role of boundary-spanners in contributing to the development of cross-boundary collaborative practices during the crisis. On the one hand, the need for creating designated networking functions at municipalities is underscored. As boundary spanners are familiar with other domains' intrinsic workings, needs, and motivations, they are well suited to design arrangements that promote openness for joint, critical learning. On the other hand, this study has shown that the importance of boundary-spanners becomes particularly significant when reflexive governance arrangements have not become established and structuralized yet. This leads to the advice that creating the framework conditions conducive for reflexive governance is just as important. This could, for instance, imply jointly creating slack resources that allow for initiating shared inter-organizational practices of knowledge creation in the face of unexpected situations.

Further, governance incentives for integrating crisis response, recovery, and transformation are needed. It is essential to rebuild quickly after a disturbance. Still, the general conditions for resilience need to be strengthened in perspective of potential future threats to avoid the superficiality of quick-fix responses (Carpenter et al., 2012). Accordingly, the strategy-making processes for long-term recovery and transformation should not be delayed until after the crisis, so alternative pathways can be implementing while responding to current disruptions (Acuto, 2020a). This means that municipalities and resilience programs need to establish stronger links between learning about urban resilience during the crisis, policy-making, and institutional adaptation.

References

- Acuto, M. (2020a). COVID-19: Lessons for an Urban(izing) World. *One Earth*, 2(4), 317–319.
<https://doi.org/10.1016/j.oneear.2020.04.004>
- Acuto, M. (2020b). Engaging with global urban governance in the midst of a crisis. *Dialogues in Human Geography*, 10(2), 221–224. <https://doi.org/10.1177/2043820620934232>
- Acuto, M., Larcom, S., Keil, R., Ghojeh, M., Lindsay, T., Camponeschi, C. & Parnell, S. (2020). Seeing COVID-19 through an urban lens. *Nature Sustainability*, 3(12), 977–978.
<https://doi.org/10.1038/s41893-020-00620-3>
- Acuto, M. & Leffel, B. (2020). Understanding the global ecosystem of city networks. *Urban Studies*, 58(9), 1758–1774. <https://doi.org/10.1177/0042098020929261>
- Adger, W., Dessai, S., Goulden, M., Hulme, M., Lorenzoni, J., Nelson, D., Naess, L., Wolf, J., Wreford, A., (2009). Are there social limits to adaptation to climate change? *Climatic Change* 93, 335-354.
- Ahern, J. (2011). From fail-safe to safe-to-fail: Sustainability and resilience in the new urban world. *Landscape and Urban Planning*, 100(4), 341-343.
- Alasuutari, P. (2010). The rise and relevance of qualitative research. *International Journal of Social Research Methodology*, 13(2), 139–155. <https://doi.org/10.1080/13645570902966056>
- Ansell, C., Sørensen, E., & Torfing, J. (2020). The COVID-19 pandemic as a game changer for public administration and leadership? The need for robust governance responses to turbulent problems. *Public Management Review*, 1–12. <https://doi.org/10.1080/14719037.2020.1820272>
- Beilin, R., & Wilkinson, C. (2015a). Introduction: Governing for urban resilience. *Urban Studies*, 52(7), 1205–1217. <https://doi.org/10.1177/0042098015574955>
- Blatter, J. (2012). *Forms of Political Governance: Theoretical Foundations and Ideal Types*. Lucerne: Working Paper Series: “Glocal Governance and Democracy” 07. This is a translated and abbreviated version of Blatter, J. (2007). *Politische Steuerungs- und Integrationsformen in Metropolregionen der USA (1850-2000)*. Baden-Baden: Nomos
- Bowen, G. A. (2009). Document Analysis as a Qualitative Research Method. *Qualitative Research Journal*, 9(2), 27–40. <https://doi.org/10.3316/qrij0902027>
- Bryman, A. (2012). *Social Research Methods (4th ed.)*. Oxford: Oxford University Press.

- Bryson, J. M. (2004). What to do when Stakeholders matter. *Public Management Review*, 6(1), 21–53.
<https://doi.org/10.1080/14719030410001675722>
- Carpenter, S., Arrow, K., Barrett, S., Biggs, R., Brock, W., Crépin, A. S., Engström, G., Folke, C., Hughes, T., Kautsky, N., Li, C. Z., McCarney, G., Meng, K., Mäler, K. G., Polasky, S., Scheffer, M., Shogren, J., Sterner, T., Vincent, J., . . . Zeeuw, A. (2012). General Resilience to Cope with Extreme Events. *Sustainability*, 4(12), 3248–3259. <https://doi.org/10.3390/su4123248>
- Carpenter, S., Walker, B., Anderies, J. M., & Abel, N. (2001). From Metaphor to Measurement: Resilience of What to What? *Ecosystems*, 4(8), 765–781. <https://doi.org/10.1007/s10021001-0045-9>
- Cheshmehzangi, A. (2020). *The City in Need: Urban Resilience and City Management in Disruptive Disease Outbreak Events* (1st ed. 2020 ed.). Springer
- Cordero, R., Mascareño, A., & Chernilo, D. (2016). On the reflexivity of crises. *European Journal of Social Theory*, 20(4), 511–530. <https://doi.org/10.1177/1368431016668869>
- Croese, S., Green, C., & Morgan, G. (2020). Localizing the Sustainable Development Goals Through the Lens of Urban Resilience: Lessons and Learnings from 100 Resilient Cities and Cape Town. *Sustainability*, 12(2), 550. <https://doi.org/10.3390/su12020550>
- Chilvers, J. (2012). Reflexive Engagement? Actors, Learning, and Reflexivity in Public Dialogue on Science and Technology. *Science Communication*, 35(3), 283–310.
<https://doi.org/10.1177/1075547012454598>
- Cunliffe, A. L., & Jun, J. S. (2005). The Need for Reflexivity in Public Administration. *Administration & Society*, 37(2), 225–242. <https://doi.org/10.1177/0095399704273209>
- Duijnhoven, H., & Neef, M. (2015). Disentangling Wicked Problems: A Reflexive Approach Towards Resilience Governance. *Applications of Systems Thinking and Soft Operations Research in Managing Complexity*, 91–106. https://doi.org/10.1007/978-3-319-21106-0_5
- Dzigbede, K. D., Gehl, S. B., & Willoughby, K. (2020). Disaster Resiliency of U.S. Local Governments: Insights to Strengthen Local Response and Recovery from the COVID -19 Pandemic. *Public Administration Review*, 80(4), 634–643. <https://doi.org/10.1111/puar.13249>
- Eisingerich, A. B., Bell, S. J., & Tracey, P. (2010). How can clusters sustain performance? The role of network strength, network openness, and environmental uncertainty. *Research Policy*, 39(2), 239–253. <https://doi.org/10.1016/j.respol.2009.12.007>
- Erikson, J., & Larsson, O. L. (2019). Beyond client criminalization: Analyzing collaborative governance arrangements for combatting prostitution and trafficking in Sweden. *Regulation & Governance*, 1–18. <https://doi.org/10.1111/rego.12259>

- Ersoy, A., & Hall, S. (2020). The Bristol Green Capital Partnership: an exemplar of reflexive governance for sustainable urban development? *Town Planning Review*, *91*(4), 397–413.
<https://doi.org/10.3828/tpr.2020.23>
- Feindt, P. H., & Weiland, S. (2018). Reflexive governance: exploring the concept and assessing its critical potential for sustainable development. Introduction to the special issue. *Journal of Environmental Policy & Planning*, *20*(6), 661–674.
<https://doi.org/10.1080/1523908x.2018.1532562>
- Ferrari, M. (2020). Reflexive Governance for Infrastructure Resilience and Sustainability. *Sustainability*, *12*(23), 10224. <https://doi.org/10.3390/su122310224>
- Fink, A. S. (2000). The Role of the Researcher in the Qualitative Research Process. A Potential Barrier to Achieving Qualitative Data. *Forum Qualitative Social Research*, *1*(3).
- Flick, U. (2009). *An Introduction to Qualitative Research*. Thousand Oaks, Canada: SAGE Publications.
- Folke, C., Hahn, T., Olsson, P. & Norberg, J. (2005). ADAPTIVE GOVERNANCE OF SOCIAL-ECOLOGICAL SYSTEMS. *Annual Review of Environment and Resources*, *30*(1), 441–473.
<https://doi.org/10.1146/annurev.energy.30.050504.144511>
- Fung, A. (2006). Varieties of Participation in Complex Governance. *Public Administration Review*, *66*(s1), 66–75. <https://doi.org/10.1111/j.1540-6210.2006.00667.x>
- Garavaglia, C., Sancino, A., & Trivellato, B. (2020). Italian mayors and the management of COVID-19: adaptive leadership for organizing local governance. *Eurasian Geography and Economics*, *62*(1), 76–92. <https://doi.org/10.1080/15387216.2020.1845222>
- Garvin, D. A., Edmondson, A. C. & Gino, F. (2008). Is Yours a Learning Organization? *Harvard Business Review*, 1–10. <https://www.alnap.org/system/files/content/resource/files/main/r0803h-pdf-eng.pdf>
- Gemeente Den Haag. (2018, January). *Resilient The Hague*.
<https://denhaag.raadsinformatie.nl/document/6143944/2/RIS299025%20Resilient%20The%20Hague>
- Gottschick, M. (2018). Reflexive capacity in local networks for sustainable development: Integrating conflict and understanding into a multi-level perspective transition framework. *Journal of Environmental Policy & Planning*, *20*(6), 704–719. doi:10.1080/1523908x.2013.84289
- Global Resilient Cities Network. (2020a). *CITIES FOR A RESILIENT RECOVERY: EMERGING DATA - How Chief Resilience Officers are embedding resilience in recovery efforts* (Part 1 of 3).
<https://resilientcitiesnetwork.org/programs/cities-for-a-resilient-recovery/>

- Global Resilient Cities Network. (2020b, July). *TOOLKIT FOR A RESILIENT RECOVERY*.
https://resilientcitiesnetwork.org/downloadable_resources/Programs/Resilience-Toolkit.pdf
- Gulati, R. & Nickerson, J. A. (2008). Interorganizational Trust, Governance Choice, and Exchange Performance. *Organization Science*, 19(5), 688–708. <https://doi.org/10.1287/orsc.1070.0345>
- Haase, A. (2020). Covid-19 as a Social Crisis and Justice Challenge for Cities. *Frontiers in Sociology*, 5.
<https://doi.org/10.3389/fsoc.2020.583638>
- Hendriks, C. M., & Grin, J. (2007). Contextualizing Reflexive Governance: the Politics of Dutch Transitions to Sustainability. *Journal of Environmental Policy & Planning*, 9(3–4), 333–350.
<https://doi.org/10.1080/15239080701622790>
- Huck, A., Monstadt, J., & Driessen, P. (2020). Mainstreaming resilience in urban policy making? Insights from Christchurch and Rotterdam. *Geoforum*, 117, 194–205.
<https://doi.org/10.1016/j.geoforum.2020.10.001>
- Hyden, G. (2001). Operationalizing Governance for Sustainable Development. *Perspectives on Global Development and Technology*, 17(2), 13–31. <https://doi.org/10.1163/156914901753386949>
- Hynes, W., Trump, B., Love, P. & Linkov, I. (2020). Bouncing forward: a resilience approach to dealing with COVID-19 and future systemic shocks. *Environment Systems and Decisions*, 40(2), 174–184.
<https://doi.org/10.1007/s10669-020-09776-x>
- Janssen, M., & van der Voort, H. (2020). Agile and adaptive governance in crisis response: Lessons from the COVID-19 pandemic. *International Journal of Information Management*, 55, 102180.
<https://doi.org/10.1016/j.ijinfomgt.2020.102180>
- Kemp, R., & Loorbach, D. (2006). Transition management: A reflexive governance approach. In J.-P. Voß, D. Bauknecht, & R. Kemp (Eds.), *Reflexive governance for sustainable development* (pp. 103–130). Cheltenham: Edward Elgar
- Klijn, E. H., & Koppenjan, J. (2015). *Governance Networks in the Public Sector* (1st ed.). Routledge.
- Kontogiannis, T. (2021). A qualitative model of patterns of resilience and vulnerability in responding to a pandemic outbreak with system dynamics. *Safety Science*, 134, 105077.
<https://doi.org/10.1016/j.ssci.2020.105077>
- Leitner, H., Sheppard, E., Webber, S., & Colven, E. (2018). Globalizing urban resilience. *Urban Geography*, 39(8), 1276–1284. <https://doi.org/10.1080/02723638.2018.1446870>
- Markard, J., & Rosenbloom, D. (2020). A tale of two crises: COVID-19 and climate. *Sustainability: Science, Practice and Policy*, 16(1), 53–60. <https://doi.org/10.1080/15487733.2020.1765679>

- Matyas, D., & Pelling, M. (2014). Positioning resilience for 2015: the role of resistance, incremental adjustment and transformation in disaster risk management policy. *Disasters*, 39(s1), s1– s18. <https://doi.org/10.1111/disa.12107>
- McConnell, A. (2017). Hidden agendas: shining a light on the dark side of public policy. *Journal of European Public Policy*, 25(12), 1739–1758. <https://doi.org/10.1080/13501763.2017.1382555>
- McGuirk, P., Dowling, R., Maalsen, S. & Baker, T. (2020). Urban governance innovation and COVID-19. *Geographical Research*, 59(2), 188–195. <https://doi.org/10.1111/1745-5871.12456>
- McNutt, K., & Rayner, J. (2018). Is learning without teaching possible? The productive tension between network governance and reflexivity. *Journal of Environmental Policy & Planning*, 20(6), 769–780. doi:10.1080/1523908x.2014.986568
- Meadowcroft, J. & Steurer, R. (2013). Assessment practices in the policy and politics cycles: a contribution to reflexive governance for sustainable development? *Journal of Environmental Policy & Planning*, 20(6), 734–751. <https://doi.org/10.1080/1523908x.2013.829750>
- Meerow, S., Newell, J. P., & Stults, M. (2016). Defining urban resilience: A review. *Landscape and Urban Planning*, 147, 38–49. <https://doi.org/10.1016/j.landurbplan.2015.11.011>
- Menoni, S., & Schwarze, R. (2020). Recovery during a crisis: facing the challenges of risk assessment and resilience management of COVID-19. *Environment Systems and Decisions*, 40(2), 189–198. <https://doi.org/10.1007/s10669-020-09775-y>
- Michie, J. (2020). ‘Building back better’ following the global covid-19 crisis. *International Review of Applied Economics*, 34(6), 697–698. <https://doi.org/10.1080/02692171.2020.1839003>
- Moraci, F., Errigo, M., Fazia, C., Burgio, G., & Foresta, S. (2018). Making Less Vulnerable Cities: Resilience as a New Paradigm of Smart Planning. *Sustainability*, 10(3), 755. <https://doi.org/10.3390/su10030755>
- Newig, J., Günther, D. & Pahl-Wostl, C. (2010). Synapses in the Network: Learning in Governance Networks in the Context of Environmental Management. *Ecology and Society*, 15(4). <https://doi.org/10.5751/es-03713-150424>
- Ostrom, E. (2005) *Understanding Institutional Diversity*. Princeton University, New Haven Connecticut, USA
- Paton, D., Smith, L. & Violanti, J. (2000). Disaster response: risk, vulnerability and resilience. *Disaster Prevention and Management: An International Journal*, 9(3), 173–180. <https://doi.org/10.1108/09653560010335068>
- Pelling, M. (2003). *The Vulnerability of Cities: Natural Disasters and Social Resilience*. Routledge.

- Peters, B. G. (2021). Governing in a time of global crises: the good, the bad, and the merely normal. *Global Public Policy and Governance*, 1(1), 4–19. <https://doi.org/10.1007/s43508-021-00006>
- Pierre, J. (2005). Comparative Urban Governance. *Urban Affairs Review*, 40(4), 446–462. <https://doi.org/10.1177/1078087404273442>
- Provan, K. G., & Kenis, P. (2007). Modes of Network Governance: Structure, Management, and Effectiveness. *Journal of Public Administration Research and Theory*, 18(2), 229–252. <https://doi.org/10.1093/jopart/mum015>
- Resilient Cities Network. (2020a, November 20). *Cities for a Resilient Recovery*. <https://resilientcitiesnetwork.org/programs/cities-for-a-resilient-recovery/>
- Resilient Cities Network. (2020b, December 5). *A Resilient Recovery – the Road to a New, Better Future in Latin America after COVID-19*. https://resilientcitiesnetwork.org/urban_resiliences/resilient-recovery-road-to-new-betterfuture-in-latam-after-covid19/
- Resilient Cities Network. (2020c, November 13). *Network*. <https://resilientcitiesnetwork.org/network/>
- Resilient Rotterdam. (2016). *Rotterdam Resilience Strategy. Consultation Document*. https://resilientcitiesnetwork.org/downloadable_resources/Network/Rotterdam-ResilienceStrategy-English.pdf
- Resilient The Hague. (2019). *The Hague Resilience Strategy*. https://resilientthehague.nl/site/assets/files/1141/resilience_strategy_the_hague.pdf
- Ribeiro, P. J. G. & Pena Jardim Gonçalves, L. A. (2019b). Urban resilience: A conceptual framework. *Sustainable Cities and Society*, 50, 101625. <https://doi.org/10.1016/j.scs.2019.101625>
- Rotmans, J., & Loorbach, D. (2008). Transition management: reflexive governance of societal complexity through searching, learning and experimenting.
- Schutter, O. D., & Lenoble, J. (2010). *Reflexive Governance: Redefining the Public Interest in a Pluralistic World (Modern Studies in European Law)*. Hart Publishing.
- Schein, E. H. (1987). Defining organizational culture. In J. M. Shafritz & J. S. Ott (Eds.), *Classics of organizational theory* (2nd ed., pp. 381–396). Chicago, IL: The Dorsey Press.
- Schön, D. A.: 1983, *The Reflective Practitioner: How Professionals Think in Action*, Basic Books Inc., New York.
- Senge, P. M. (1997). THE FIFTH DISCIPLINE. *Measuring Business Excellence*, 1(3), 46–51. <https://doi.org/10.1108/eb025496>

- Sharifi, A., & Khavarian-Garmsir, A. R. (2020). The COVID-19 pandemic: Impacts on cities and major lessons for urban planning, design, and management. *Science of The Total Environment*, 749, 142391. <https://doi.org/10.1016/j.scitotenv.2020.142391>
- Sharifi, A., & Yamagata, Y. (2018). Resilience-Oriented Urban Planning. *Resilience-Oriented Urban Planning*, 3–27. https://doi.org/10.1007/978-3-319-75798-8_1
- Sol, J., van der Wal, M. M., Beers, P. J. & Wals, A. E. (2017). Reframing the future: the role of reflexivity in governance networks in sustainability transitions. *Environmental Education Research*, 24(9), 1383–1405. <https://doi.org/10.1080/13504622.2017.1402171>
- Spaans, M., & Waterhout, B. (2017). Building up resilience in cities worldwide – Rotterdam as participant in the 100 Resilient Cities Programme. *Cities*, 61, 109–116. <https://doi.org/10.1016/j.cities.2016.05.011>
- Stewart, J. (2012). Multiple-case Study Methods in Governance-related Research. *Public Management Review*, 14(1), 67–82. <https://doi.org/10.1080/14719037.2011.589618>
- Strauss, A., and Corbin, J. M. (1990). Basics of Qualitative Research: Grounded Theory Procedures and Techniques. Newbury Park, CA: Sage.
- ȚICLĂU, T., HINȚEA, C., & ANDRIANU, B. (2020). Adaptive and Turbulent Governance. Ways of Governing that Foster Resilience. The Case of the COVID-19 Pandemic. *Transylvanian Review of Administrative Sciences, Special Issue 2020*, 167–182. <https://doi.org/10.24193/tras.si2020.10>
- Therrien, M. - C., Usher, S., & Matyas, D. (2019). Enabling strategies and impeding factors to urban resilience implementation: A scoping review. *Journal of Contingencies and Crisis Management*, 28(1), 83–102. <https://doi.org/10.1111/1468-5973.12283>
- Treib, O., Bähr, H., & Falkner, G. (2007). Modes of governance: towards a conceptual clarification. *Journal of European Public Policy*, 14(1), 1–20. <https://doi.org/10.1080/13501760601071406>
- The Rockefeller Foundation & ARUP. (2014). *City Resilience Framework* (City Resilience Framework). <https://www.arup.com/perspectives/publications/research/section/city-resilience-index>
- United Nations. (2020, Juli). *Policy Brief: Covid 19 in an Urban World*. https://www.un.org/sites/un2.un.org/files/sg_policy_brief_covid_urban_world_july_2020.pdf
- Van Belle, S., Affun-Adegbulu, C., Soors, W., Srinivas, P. N., Hegel, G., Van Damme, W., Saluja, D., Abejirinde, I., Wouters, E., Masquillier, C., Tabana, H., Chenge, F., Polman, K. & Marchal, B. (2020). COVID-19 and informal settlements: an urgent call to rethink urban governance. *International Journal for Equity in Health*, 19(1). <https://doi.org/10.1186/s12939-020-01198-0>

- van Meerkerk, I. & Edelenbos, J. (2014). The effects of boundary spanners on trust and performance of urban governance networks: findings from survey research on urban development projects in the Netherlands. *Policy Sciences*, 47(1), 3–24. <https://doi.org/10.1007/s11077-013-9181-2>
- Voß, J., Bauknecht, D., & Kemp, R. (2006). *Reflexive Governance for Sustainable Development*. Edward Elgar Publishing.
- Voß, J.-P. & Bornemann, B. (2011). The Politics of Reflexive Governance: Challenges for Designing Adaptive Management and Transition Management. *Ecology and Society*, 16(2), 1–24. <https://doi.org/10.5751/es04051-160209>
- Voß, J. P., & Kemp, R. (Eds.). (2005). Reflexive Governance for Sustainable Development – Incorporating feedback in social problem solving. *Paper for ESEE Conference: Special Session on Transition Management*, 1–31. <https://kemp.unu-merit.nl/pdf/Voß-Kemp%20Reflexive%20Governance%20for%20ESEE%202005.pdf>
- Wang, C., Medaglia, R., & Zheng, L. (2018). Towards a typology of adaptive governance in the digital government context: The role of decision-making and accountability. *Government Information Quarterly*, 35(2), 306–322. <https://doi.org/10.1016/j.giq.2017.08.003>
- Wardekker, A., Wilk, B., Brown, V., Uittenbroek, C., Mees, H., Driessen, P., Wassen, M., Molenaar, A., Walda, J., & Runhaar, H. (2020). A diagnostic tool for supporting policymaking on urban resilience. *Cities*, 101, 102691. <https://doi.org/10.1016/j.cities.2020.102691>
- Wells, P., Abouarghoub, W., Pettit, S., & Beresford, A. (2020). A socio-technical transitions perspective for assessing future sustainability following the COVID-19 pandemic. *Sustainability: Science, Practice and Policy*, 16(1), 29–36. <https://doi.org/10.1080/15487733.2020.1763002>
- Willi, Y., Nischik, G., Braunschweiger, D., & Pütz, M. (2020). Responding to the COVID-19 Crisis: Transformative Governance in Switzerland. *Tijdschrift Voor Economische En Sociale Geografie*, 111(3), 302–317. <https://doi.org/10.1111/tesg.12439>
- Williams, P. (2002). The Competent Boundary Spanner. *Public Administration*, 80(1), 103–124. <https://doi.org/10.1111/1467-9299.00296>
- Wray, S. (2020, 28. Oktober). COVID-19 is shifting the focus from smart cities to resilient cities - Cities Today - Connecting the world's urban leaders. *Cities Today - Connecting the world's urban leaders*. <https://cities-today.com/covid-19-shifts-the-focus-from-smart-citiesto-resilient-cities/>

Appendix A: Interview Guides

Interview Guide A, Members of the Resilience Teams

Introducing myself and my research, explaining that the interview will be recorded and transcribed as well as how the data will/can be used and asking for consent for this.

1. Can you briefly tell me about the resilience team and your role in it?
2. Can you tell me about the role and responsibilities of the resilience team during the COVID-19 pandemic / crisis recovery?
Follow-Up: Which projects have you been working on? How was decided upon your responsibilities?
3. How are the work activities of the resilience team different to previous to the pandemic?
Follow-Up: How did you experience the need to change the work activities of your team? Have you experienced any difficulties when attempting to initiate changes?
4. How have you discussed your way of working (in terms of goals, processes, procedures) during the COVID-19 pandemic?
Follow-Up: What was discussed and with whom? Who initiated the discussion?
5. How do you experience the role of the COVID-19 pandemic for the work of your organization?
Follow-Up: Has your organization's future role in the COVID-19 recovery and beyond been discussed? If yes, how? And with whom?
6. How have you attempted to integrate the happenings of the COVID-19 pandemic and the insights they might have revealed into your work of resilience-building?
Follow-Up: Did you have any specific strategies to enhance learning during the pandemic? If yes, what did they involve? Have you experienced any difficulties in this regard?
7. Has the resilience team entered any new partnerships during the COVID-19 pandemic? Or are you planning to do so in the future?
Follow-Up: If yes, how do these collaborations look like? What were the reasons for setting up these collaborations? How were the partners selected? Who initiated the collaborations?

8. How are the collaborations coordinated, and who coordinates them?
Follow-Up: How often and in what ways do you meet / communicate with the different partners? How long have you already been working together?
9. Which relevant knowledge, insights or skills regarding urban resilience building do these partners have to offer?
10. Have these collaborations led to new insights regarding the resilience of your city?
Follow-Up: If yes, in what ways? What is discussed with the different actors? Were any previous ideas regarding resilience (building) specifically confirmed or challenged in the context of the pandemic?
11. How has the input by different actors been related or applied to your organization's work?
Follow-Up: Have you experienced any challenges with combining different perspectives in the context of a resilient crisis recovery or relating them to your own work?
12. Are you planning to transfer new insights (regarding urban resilience) gained during the COVID-19 pandemic into any future strategies?
Follow-Up: If yes, how? What do you plan to change as compared to current urban resilience strategies?
13. What are the aspects of the strategies that are at the center of your attention and that are being reviewed or adapted the most?
Follow-Up: How do you explain that?
14. Have you re-defined / are you going to re-define in the adapted / new strategy
 - the core strategic issues / focus areas you address
 - the vision of your organization in the future
 - objectives you aim to achieve
 - plans for actions, that you take to achieve your objectives
 - the ways in which you allocate resources to strategic objectives, such as human resources or finances
 - the individuals or organizations you aim to involve in the implementation of your objectives?

If yes, how and in what ways?

Thanking the interviewee for the time. Offering the interviewee to get in contact again in case of questions or additional comments, and updates about the research.

Interview Guide B, Collaborators from Other Municipal Departments

Introducing myself and my research, explaining that the interview will be recorded and transcribed as well as how the data will/can be used and asking for consent for this.

1. Can you briefly tell me something about your department and your position in it?
2. Can you tell me about your department's role in the context of the COVID-19 crisis and recovery?
Follow-Up: How is this role different to previous to the pandemic?
3. Can you tell me about your collaboration with the resilience team in the context of the COVID-19 crisis / recovery?
Follow-Up: For what reasons are you collaborating? What is your interest in this collaboration? What is your role in this collaboration? Is this collaboration the first? How was the collaboration initiated?
4. How does the collaborative process look like?
Follow-Up: How do you communicate with each other? How often do you meet? How do you share information? Who coordinates and leads the meetings?
5. Are you also involved in any other (new) partnerships in the context of the COVID-19 crisis / recovery?
Follow-Up: If yes, what kind of partnerships and with whom? How were they initiated? And for which reasons?
6. Has the collaborative work process itself been subject to discussion?
Follow-Up: If yes, has that led to any changed of the work processes and procedures of your organization? When attempting to change processes and procedures, have you experienced any difficulties? If yes, in what ways?
7. What issues and topics are being discussed with the resilience teams and other key partners in the context of crisis recovery?
8. Has your understanding of how a resilient crisis recovery should look like changed throughout the past months?
Follow-Up: If yes, how and in what ways?
9. Has your understanding of the core issues that need to be addressed to strengthen urban resilience changed?

Follow-Up: If yes, how and in what ways?

10. Has your understanding of the ways in which this should be done changed?

Follow-Up: If yes, how and in what ways?

11. How will these (new) insights of yours translate in strategies for a resilient recovery / new urban resilience strategies?

Follow-Up: Were there any specific aspects of the strategies that have been affected by your input (such as the stakeholders that should be involved, what should be achieved, or the specific activities that should be undertaken)? If yes, which ones?

Thanking the interviewee for the time. Offering the interviewee to get in contact again in case of questions or additional comments, and updates about the research.

Interview Guide C, External Partners

Introducing myself and my research, explaining that the interview will be recorded and transcribed as well as how the data will/can be used and asking for consent for this.

1. Can you briefly tell me something about your profession / your expertise and field of research?

2. How are you involved with the (resilient) recovery from the COVID-19 pandemic?

Follow-Up: How is your work related to the topic of resilience? Have you dealt with this topic previously?

3. Can you tell me about your collaboration with the resilience team during the crisis recovery?

Follow-Up: How is it coordinated? How was it initiated? Have you worked together before? What was your interest in this collaboration?

4. Can you tell me about your role / the role of your department in this collaboration?

Follow-Up: Which are your specific tasks and responsibilities? On which issues / questions are you working? In which discussions are you involved?

5. With whom do you work together on this?

Follow-Up: Who do you consult for information or inspiration?

6. Can you tell me about the processes of working together with the resilience team / other partners?

Follow-Up: How often do you meet with the members of the resilience team or other partners?

How do you communicate with each other? How do you share information?

7. Has the collaborative process itself been subject to discussion?

Follow-Up: If yes, what was discussed? By whom? And who initiated this discussion?

8. Have you gained any new insights regarding the core issues of urban resilience during the COVID-19 pandemic?

Follow-Up: If yes, which insights? How did you gain them?

9. Have you changed your perspective on what needs to be done for strengthening urban resilience during the COVID-19 pandemic?

Follow-Up: If yes, which insights? How did you gain them?

10. How did you experience your recommendations being received?

11. How is your input used in the context of the plans for a crisis recovery?

12. How has / does your input affect the development of new urban resilience strategies / strategies for a resilient crisis recovery?

13. Were there any specific aspects of the strategies that have been affected by your input (such as the stakeholders that should be involved, what should be achieved, or the specific activities that should be undertaken)? If yes, which ones?

Thanking the interviewee for the time. Offering the interviewee to get in contact again in case of questions or additional comments, and updates about the research.

Appendix B: List of Respondents

No.	Position / Affiliation	Length of Interview (min.)	Date of Interview	Virtual Location
1	Researcher Coordinator of Policy-Science in Interface Rotterdam, Research on Community Initiatives during the Corona Crisis	55	28.04.2021	Zoom
2	Researcher, Centre of Expertise Governance of Urban Transitions, The Hague University, Research Societal Impact of Corona in The Hague	43	29.04.2021	Zoom
3	Director Impact and Response Team, Municipality Rotterdam	35	29.04.2021	MSTeams
4	Deputy Resilience Officer, Resilient Rotterdam	50	30.04.2021	Zoom
5	Project Secretary, Impact and Response Team, Municipality Rotterdam	35	30.04.2021	Zoom
6	Chief Resilience Officer, Resilient The Hague	51	06.04.2021	Zoom
7	Founder, NGO (Training Program for Community Actors), The Hague	33	06.04.2021	Zoom
8	Communication Advisor and Press Officer, Erasmus University	59	07.05.2021	Zoom
9	Coordinator, Resilient Medellin, Collaborator of Resilient The Hague during the Corona Crisis	48	11.05.2021	MSTeams
10	Research and Knowledge Coordinator, Municipality Rotterdam	40	13.05.2021	Zoom
11	Researcher at Policy-Science Interface in Rotterdam, Research on Societal impact of the Corona Crisis	32	17.05.2021	Zoom
12	Researcher at Research Platform Rotterdam, Research on Pilot Project of a "Resilient Neighborhood" in Rotterdam	50	17.05.2021	Zoom
13	Strategic Advisor Central Management, Municipality Rotterdam	37	18.05.2021	MSTeams
14	Coordinating Strategy Advisor Department of Social Affairs, Municipality Rotterdam	38	18.05.2021	MSTeams
15	Director, Centre of Expertise Governance of Urban Transitions, The Hague University, Research on the Societal Impact of the Corona Crisis in The Hague	38	19.05.2021	Zoom
16	Strategist, City Hall Rotterdam	32	20.05.2021	MSTeams
17	Strategic Advisor, Urban Development, Municipality of The Hague	50	28.05.2021	MSTeams
18	Junior Strategy Advisor, Social Affairs, Municipality of The Hague	38	04.06.2021	MSTeams

Appendix C: Information Sheets for Interview Participants

Introduction

As you know, I am a master's student from the Urban Governance program at Erasmus University and currently conducting my master's thesis research on the adaptation of urban resilience strategies during the COVID-19 pandemic in Rotterdam and The Hague. I am conducting interviews to inform my study.

Data Collection

We have previously agreed on a date and time for an online interview. During our interview, I will ask you some general questions about your work in the context of the COVID-19 recovery. There are about 10 to 15 interview questions. Questions will be open-ended, and therefore, the length and direction of the interview will depend to a large part on your input. However, the interview can be expected to last somewhere around 30 minutes. The interview will be recorded on zoom / teams, so I can transcribe it afterwards to be able to analyze the interview material.

Purpose of Data Collection

The data collection serves research purposes only.

Confidentiality & Data Protection

The interview transcript will **not** be included in the thesis report, which will be made publicly accessible. Only my supervisors will see the full transcript of the interview in order to ensure its authenticity. The video recording will **not** be shared. Further, the transcript material will be stored by the University in case of future sampling inspections.

The analysis of the interview will inform the research results of my thesis and will be written about in the thesis report. Additionally, I could choose to use quotes of what you are saying to illustrate arguments in my text. If you do not want me to quote you in my thesis report, please let me know. Also, you can let me know whether I can use your name in my thesis report and the interview transcript or you prefer to remain anonymous.

Consent

At the beginning of the interview recording, I will verbally ask you for your consent on

-the permission to video and audio record of the interview on zoom / teams (required for my research)

-the permission to use quotes from the interview in my thesis report (optional)

-the permission to use your name with these quotes (optional)

Individual Rights & Access to Information

Your answering of the questions is, of course, voluntary. So, you do not need to answer all my questions and you can stop anytime. You have the right to request more information about the research and the data analysis any time after the interview. Of course, I will send you a link to my thesis report once I have finalized it. Further, you have the right to withdraw your consent before the thesis report is submitted. You will be able to reach me via my e-mail address or phone number in case of any requests, questions or concerns that may arise after the interview.

Thank you very much for your participation! I am looking forward to our interview!

Aurelia Schwarz, Student Urban Governance, Erasmus University Rotterdam

Appendix D: Overview of Codes and Code Groups

COMPLEXITY AND SCALE OF THE CORONA CRISIS

ROTTERDAM

Complexity of the Crisis
Stimulating Cross-Departmental
Collaboration at Municipality

Scale of the Crisis Requiring for
a More Complex Municipal
Crisis Organization Divided into
Crisis Management, Impacts,
Recovery
– New Approach

ROTTERDAM + THE HAGUE

Crisis Generating New Complex
Social Problems / Problem
Combinations

Complexity of the Crisis
Generating New Knowledge
Needs

Complexity of the Crisis
Stimulating Collaboration
between Policy and Science
Domains, Research on Socio-
Economic Impacts of Crisis

THE HAGUE

Complexity of the Crisis Requiring for
First-Hand Knowledge,
Neighborhood-Workers

Complexity of Crisis Impacts
Requiring for Diverse Sources of
Information

Complexity of Crisis Requiring Long-
Term Recovery Plans Next to Shorter-
term Measures – New Approach

Complexity of Crisis Dynamics
Challenging Longer-Term Recovery
Planning

SENSE OF URGENCY RELATED TO THE CORONA CRISIS

ROTTERDAM

Sense of Urgency Stimulating
Learning between Cities on
International Scale

Urgency of The Crisis to Render
Existing Networks for
Knowledge Exchange Vital

Urgency of The Crisis to
Stimulate Connecting
Individuals to Take Initiative

ROTTERDAM + THE HAGUE

Urgency of the Crisis to Require
Quick Knowledge Production in
Joint Effort between Municipality
and Knowledge Institutions

Urgency of the Crisis (as an
Opportunity) to Speed Up
Science-Policy Collaborations/
Joint Knowledge Production

Urgency of The Crisis to Render
Communication between
Municipal Departments More
Direct and Efficient

RESILIENCE PROGRAMS' FOCUS ON LONG-TERM RECOVERY AND TRANSFORMATION

ROTTERDAM

Resilience Program Does Not Have Capacities for Immediate Crisis Management

Resilience Program Promoting Longer-Term Orientation During Crisis Recovery

Learning about Transformative Strategies and Solutions in International Cities Network

THE HAGUE

Resilience Program Focusing on Long-Term Recovery During Crisis. No Role in Crisis Response.

Complexity of Crisis Requiring Long-Term Recovery Plans next to Shorter-term Measures – New Approach

Long-Term Recovery Process to Be Participatory and Inclusive. Opening-Up to Diverse Perspectives on Problems and Solutions.

Internal Stakeholders Needed to Guarantee Uptake and Relevance of Long-Term Strategies

MUNICIPALITIES' RESOURCE FOCUS ON IMMEDIATE CRISIS RESPONSE

ROTTERDAM

Economic Dimensions Prioritized in Overarching Urban Short-to Medium Term Recovery Strategy

Political Framework Conditions Necessitating Focus on Short-Term Recovery Actions and Plans

Challenge of Reflecting on Lessons from the Crisis during Response Phase

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Socio-Economic Short-to Medium Term Recovery Plan To Address the Most Immediate Crisis Impacts

Municipality's Overarching Focus on Short-to Medium Term Recovery

Internal Stakeholders Involved in Immediate Crisis Response, Delay in Long-Term Recovery Strategy

EXISTING NETWORKS FOR KNOWLEDGE EXCHANGE

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Existing Knowledge Infrastructure Having Been Cultivated Over a Long Time

Existing Knowledge Infrastructure to Enhance Speed of Joint Knowledge Production during Crisis

Policy Science Infrastructure to allow for Flexible Collaboration during the Crisis

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Translating Knowledge Gained in International Networks into Advice / Inspiration for Own Organization

International Resilient Cities Network Facilitating Flexible Knowledge Exchange During Crisis

Exchanging Knowledge with Each Other and International Cities from the Resilient Cities Network on how to position themselves as Resilience Programs During the Crisis

THE HAGUE

Deliberation on Institutionalizing Knowledge Infrastructure in the Aftermath of Crisis, Crisis to Emphasize Need for Knowledge Infrastructure

Access to Societal Networks Important to Get Information on New Societal Problems, NGO as Connection Point

Resilience Program Sharing Insights on Urban Heat and Corona in Resilient Cities Network

Adopting Methodologies for Assessing Urban Resilience from International Partner Cities

TRUST BETWEEN ACTORS FROM DIFFERENT KNOWLEDGE OR PRACTICE BACKGROUNDS

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Frequent Interactions over Longer Time Having Enhanced Trust between Actors from Science and Policy Domains

Relationship-Building between Municipality and Knowledge Institutions in Resilience Context over Longer Time

Trust to Facilitate and Speed Up Policy-Science Collaboration during the Crisis

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Policy-Science Collaboration during Crisis to Improve Municipalities' Confiding in Capacities of Knowledge Partners

Trust as Coordination Mechanism for Joint Research Projects Covering Politically Sensitive Topics

CONNECTING ACTORS (BOUNDARY-SPANNERS)

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Connecting Individuals Having Created Framework Conditions For Policy Science Collaboration during the Crisis

Connecting Individuals Enabling Meaningful Exchange between Policy and Science Domains through Workshops and Webinars Before and During the Crisis

Urgency of the Crisis Motivates Connecting Individuals to Take Initiative for Realizing Policy-Science Collaboration

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Joint Knowledge Production between Science and Policy to Depend on Contacts and Initiative of Connecting Actors

NGO as Connecting Actor between Municipality / Resilience Program and Communities

Connecting Actors at Municipality and Knowledge Institutions Planning to Institutionalize Science-Policy Collaborations after Crisis

POLITICAL CYCLES AND AGENDAS

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Political Dynamics Requiring Shorter Term Recovery Planning

Political Interests Complicating Leveraging Lessons from the Crisis

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Changing Political Interests to Challenge Focus on Concrete Long-Term Strategies and Actions

Long-Term Recovery Strategies in Friction with Upcoming Municipal Elections

ORGANIZATIONAL CULTURE / STRUCTURE



PROBLEM FRAMING

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Socio-Economic Vulnerabilities to Reinforce Negative Impacts of the Crisis

Problem Framing During Crisis to Include Subjective Factors Like Citizens’ Declining Trust in Public Institutions

Policy-Science Collaboration to Broaden Problem Framing to Include Social Dimension of Resilience

Social Dimension of Resilience To Gain Increasing Attention Over Course of the Crisis

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Segregation in the City to Reinforce Problems during Corona Crisis

Collaborative Problem Framing Through Inclusive Long-term Strategy-Making Process

Opening-Up Strategy Making Process to Discover Complex Problem Interlinkages

Plan to Involve actors from Different Levels of Government and Different Societal Sectors in Long-Term Strategy-Making Process

SOLUTION FRAMING



SOCIAL LEARNING



INTEGRATED KNOWLEDGE PRODUCTION

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Science-Policy Collaboration in Research Projects to Co- Produce Knowledge on the Socio-Economic Impacts of the Crisis in Line With Knowledge Needs of Municipality

SCRUTINIZATION OF UNDERLYING ASSUMPTIONS AND PRACTICES

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Resilience Programs Evaluating Own Competences, Role and Function in the Crisis Management of the Municipalities