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David, Lucinda

2021

Document Version:

Publisher's PDF, also known as Version of record

[Link to publication](#)

Citation for published version (APA):

David, L. (2021). *A Time and Place for Agency*. [Doctoral Thesis (compilation), Department of Human Geography]. Lund University.

Total number of authors:

1

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+46 46-222 00 00



A Time and Place for Agency

LUCINDA DAVID

FACULTY OF SOCIAL SCIENCES | LUND UNIVERSITY



A TIME AND PLACE FOR AGENCY examines how and why context matters in shaping the constraints and available opportunities to collectivize for launching policy actions during times of economic adversity.



Lucinda David studied economics at De La Salle University, Philippines and economic geography at Lund University, Sweden. She is a PhD fellow at the Department of Human Geography and affiliated with the Center for Innovation Research (CIRCLE), LTH. Her research interests include individual as well as collective action, inter-temporal conflicts over resources, timing norms, institutional change, and energy transitions.

A Time and Place for Agency

A Time and Place for Agency

Lucinda David



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DOCTORAL DISSERTATION

by due permission of the Faculty of Social Sciences, Lund University, Sweden.
To be defended at Geocentrum I, Sölvegatan 10, Lund, Sweden
on January 21, 2022 at 1000.

Faculty opponent

Professor Brita Hermelin
Department of Culture and Society
Centre for Local Government Studies
Linköping University, Sweden

| | | |
|---|-----------------------------|---|
| Organization LUND UNIVERSITY Department of Geography Lucinda David | | Document name: Doctoral dissertation |
| | | Date of issue: December 2021 |
| | | Sponsoring organization |
| Title and subtitle: A Time and Place for Agency | | |
| Abstract <p>If places indeed matter, as economic geographers believe, then it must matter most to the people who live their everyday lives in these places and experience the world materially and socially through it. When a crisis hits and uncertainty ensues, it affects people who call these places home the most. So much so, that some of them might be willing to stake a claim on its recovery, and development through purposeful actions. Some of these actors and these actions have helped places overcome wicked developmental challenges, while other places continue to be beset with protracted economic decline where local actors find progress in development continually elusive. This raises the main research question of this dissertation: how and why do responses of local actors to economic crises vary across time and place?</p> <p>In answering this question, this dissertation seeks to examine and understand the role of human actors in the transformation of places undergoing local economic adversity. In order to do so, it explores and joins together the conversations on resilience, agency, and place leadership to find missing puzzle pieces in explaining why and how actors act and engage in transforming places. Empirically, it conducts a comparative case study on the closures of two large R&D facility in Lund and Södertälje as well as uses 56 cases of place leadership and policy engagements from metadata in order to apply the novel method of QCA. This dissertation has found that responses of local actors vary because different actors face varied sets of contexts that underpin their reflexivity, decision-making, and strategies for action. These contexts also matter in shaping the constraints and available opportunities to collectivize with other actors for launching policy actions.</p> <p>Furthermore, across the three articles, this dissertation finds that actors can have profound influence on the processes of transformation in places that matter to them. They can take up roles and positions that push for local economic development policies that reflect their aspirations for themselves and for the places in which they live. These roles give actors access to resources to mobilize and the impetus to launch collective action in order to actualize policy initiatives in response to economic adversities like plant closures. In order to manage inter-temporal changes to their access to resources, they engage in activities that attempt institutional changes. Some of these actions and policies succeed and some are less successful. Actors need to navigate the contexts in which they find themselves because actions are enabled or constrained by structures with which they interact. This is what makes the process of agency contingent and why the responses of local actors to economic crises so varied.</p> <p>This dissertation has contributed to understanding the role of actors in local economic transformations and the context that constrain and enable their actions by interrogating how actors respond to place specific economic adversities as well as their involvement within place-based policy processes. Moreover, this dissertation has also engaged in further conceptualizing institutions in the agency perspective by looking at micro-level institutions that directly link actors with structures. These links allowed this dissertation to explicate generative processes on how micro-level institutions affect and enable the decisions of actors in policy intervention and resource mobilization, and how actors maneuver these institutions when collaborating with other actors.</p> | | |
| Key words: Agency, Resilience, Institutions, Timing Norms, Term limits, Place leadership, QCA | | |
| Classification system and/or index terms (if any) | | |
| Supplementary bibliographical information | | Language: English |
| ISSN and key title | | ISBN: 978-91-8039-104-7 (print), 978-91-8039-103-0 (electronic) |
| Recipient's notes | Number of pages: 239 | Price |
| | Security classification | |

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Paper 3 © (Submitted)

Faculty of Social Sciences
Department of Human Geography
Center for Innovation Research (CIRCLE)

ISBN 978-91-8039-103-0 (electronic)

ISSN 978-91-8039-104-7 (print)

Printed in Sweden by Media-Tryck, Lund University
Lund 2021



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For the struggle.

Acknowledgements

Why do we sit here in the dark, toiling away at the seemingly impossible task of doing a doctoral dissertation? It is unlikely the joy of getting published for these are too few and far between. Is it the inspiration from learning new things? Perhaps but there are parts of doing a dissertation that are completely mundane, like formatting an uncooperative table (yes, I'm looking at you Table 4). Is it the wonderful people we meet along the way? Yes, but many parts of the process of doing a doctoral dissertation are inherently lonely. My best answer to why we choose to sit here in the dark is because we hear what every geographer before us probably also heard: the call to explore and find uncharted territories of thought, and the beckoning to discover new ideas to explain the world around us and articulate new arguments on why places matter. This call is too compelling not to heed even if this means sitting here in the dark, sometimes lost, sometimes inspired, sometimes in despair, and sometimes joyful.

In heeding this call to become an economic geographer, I have been extremely fortunate to have been surrounded and supported by amazing people. My family, my friends, and my colleagues have contributed immeasurably to helping me do and finish this dissertation. It is impossible to enumerate them all so, with a grateful heart, I would like to thank all my family, friends, and colleagues for their support throughout the years. I would like to mention a few people who played big roles in helping me make and finish this journey.

Thank you to my supervisor Josephine Rekers, without whom I could never have finished this research project. Almost all the good parts of me as a researcher, she taught me. The genius of Josee as a supervisor is that she was not just interested in my work, but she was also interested in HOW I worked. This really helped me understand what on earth it was that I was doing and how I could be and do better. She taught me how to criticize and how to take criticism: generously and with reflection, reading twice, listening, and taking things on board. She taught me restraint and control in writing and the value of purposeful novelty and intentionality. As someone who was lost, Josee helped me find my way but she did

so as the true geographer's geographer that she is. She gave me little maps to help me find my way through the wilderness. I mean this both literally and figuratively. I remember holding on to this little abstract idea map she doodled on a piece of paper to help me navigate a difficult meta paper I was attempting to write, right up until that piece of paper became frayed. Josee, thank you for being the most amazing supervisor I have ever had. You are the best thing that ever happened to this PhD project.

Thank you to all my KEG and CIRCLE colleagues with special thanks to Christina Bratt, Sengül, Keyvan, Lina, Hanna, Yannu, Ju, and Pierre-Alex. You made coming to work every day nourishing and fun. I will always fondly remember that very kind time in my life.

I would also like to thank the amazing librarians at Lund University. They work quietly and effectively to support PhD students like myself, expecting no accolades in return. In my opinion, they are the unsung heroes of our research work.

To my mentors and heroes at various stages of my academic career: Charles Edquist, Cristina Chaminade, Jerker Moodysson, Martin Andersson, Lars Coenen, Per Eriksson, Markus Grillitsch, Markku Sotarauta, Michaela Trippel, Roman Martin, and Roel Rutten. Thank you for the guidance and inspiration.

Thank you to my little extended family in Sweden for the love, encouragement and support: Tina, Linus, Ellen, Maxi, Milo, Tryggve, Christine, Pelle, and Joel. Thank you especially to Tina and Tryggve for babysitting Leon while I worked on finishing this dissertation!

Thank you to my very big Filipino family especially my parents Boy and Tess, Tito Bong, Tita Andrea, Tita Mina, Kuya JP, Kuya Thelmo, Ate Cecile, Ate Bon, Nica, Pio, PJ, Andrea Jo, Ally, Migs, Yana, Yodi, and Ylla. I would like to especially thank my dad, JosePablo C. David. My very first and always hero was and is you. Thank you for teaching me I could do and be anything I wanted, for always believing in me, and for always being proud of my work. I take this little nugget out on rainy days. Thank you to my big sister Ate Bon, who has always been there for me since we were little. I hope you know I adore you.

To my friends Tito Tony, Benjamin, Ninang Erma, Gab, Dino, Julian and Yrsa, thank you for the love and support. Regular nights of Jonasta and pusoy dos helped me get through difficult times. Dinners, great company, babkas and baklavas,

fierce political and nonsense debates, and memes were welcome distractions and balm to a sometimes dejected soul.

Thank you especially to Dr. Antonio Marañon for mentoring me, helping me navigate the academic terrain, and for always being there for me and encouraging me. You are the first person I choose to share all my academic triumphs and defeats because you make everything joyful.

Much apologies to my husband and my best friend, Jonas Rosenqvist who had to suffer doing a PhD by proxy. Of all the intellectuals I cited in my bibliography, I want you to know that, to me, none compare to you as my biggest intellectual influence. Thank you for everything you have done for me, for enduring with me, and sticking by me during the most difficult of days. I cherish you with all of me.

For my son Leon Intrepid David Rosenqvist. Everything, including this dissertation, took a backseat to trying to bring you into this world, such as it is. You are the beloved Beacon of my life. You are the Fire in my belly, yes, but it is impossible for you to ever burn my heart out.

For my cat Pandora who always kept me company while I sat in the dark, no matter how late the hour. I promise to always buy you that soup snack you love so much but please do stop angling for co-authorship by typing random letters and numbers in this manuscript. It is not cool.

When you find yourself in the dark as often as I have, you tend to clutch at any wisdom that might help you find your way. There is this line from the movie 'The Martian' that stuck with me and became my PhD mantra. In narrating how he managed to survive being stuck on an inhospitable planet on his own (not unlike doing a PhD!), the character Mark Watney says "At some point, everything is going to go south on you and you're going to say this is it. This is how I end. Now you can either accept that, or you can get to work. That's all it is. You just begin. You do the math. You solve one problem, and you solve the next one, and then the next. And if you solve enough problems, you get to come home."

Lucinda David
November 3, 2021
Lund, Sweden

List of Articles

This dissertation includes three single-authored articles. Of these works, Article I and Article II are published, and Article III has been submitted.

- I. David, Lucinda. 2018. Agency and resilience in the time of regional economic crisis. *European Planning Studies*, 26(5), pp. 1041-1059
- II. David, Lucinda. 2021. The consequences of timing norms and term limits on local agency. *Environment and Planning A: Space and Economy*. October 2021.
- III. David, Lucinda. The different paths from which place leadership can manifest: a meta-analysis using qualitative comparative analysis (QCA). Submitted.

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1 A tale of two closures

Rumors of an imminent closure were rife. For months, top management had remained tightlipped on which city would face the shutdown. When a global pharmaceutical company finally announced it was closing its operations in Lund, Sweden, it ended months of speculation on which one of its global research and development departments it would close. For employees of this company in another Swedish municipality called Södertälje, the news elicited sympathy but also a sense of relief that it was not them facing closure. After all, Södertälje was the birthplace of the Swedish side of this company and founded there over a hundred years ago. This relief proved temporary, as scarcely two years later, this big pharmaceutical company would announce further closure, this time in Södertälje, permanently terminating over a thousand research and development jobs.

Stories of closures like these, especially in the midst of a pandemic (Ntounis et al. 2021), but also generally, in an age of aggressive neo-liberal policies like economic restructuring and streamlining amongst global firms, are far from uncommon. They are happening across different places around the world. Parallel closures in Lund and Södertälje posed a unique juxtaposition and as such, elicited curiosity where the similarities end and the differences start. It was uncanny that both closures precipitated a similar magnitude of loss of jobs in the region, terminated by the same global pharmaceutical company, both areas embedded in Swedish regions, and with both events relatively proximate to each other in terms of time. Even the coping strategy of both regions were similar in using the physical building of the research complex that would be left behind and setting them up as successful science parks. One key difference was the actor responding to these closures, led by the university in Lund, and by the municipal government in Södertälje. In alignment with the growing literature on the role of agency in regional development, these stories suggest that agency has important roles to play in fostering transformations in regions (Beer, Barnes, and Horne 2021; Bristow and Healy 2014a; Grillitsch, Rekers, and Sotarauta 2021; Grillitsch and Sotarauta 2020; Rekers and Stihl 2021; Steen 2016). What these roles entail are not clear-cut and merits further inquiry. What is clear, however, is that parallel closures

provide an important and critical opportunity to compare and understand how actors, bound in place and time, respond to local economic crises like closures that involve risks of abandonment of large infrastructure, job losses and the exit of competencies and skills from a region. As the world is gripped by the COVID19 pandemic and economic uncertainty spreading unevenly across regions, (Bailey et al. 2020) this opportunity proves even more salient.

1.1 Aims

The overarching aim of this dissertation is to examine and understand the role of human actors in the transformation of places undergoing local economic adversity. In order to do so, it explores and joins together the conversations on resilience, agency, and place leadership to find missing puzzle pieces in explaining why and how actors act and engage in transforming places. Resilience typically centers on system characteristics of a regional economy that makes it more or less impervious to crises (Evenhuis 2020). The agency perspective focuses on human actors to explain their roles in navigating often adverse economic circumstances in engaging in regional economic transformations (Grillitsch and Sotarauta 2020). The place leadership literature focuses on how networks of actors persuade other actors to pool their resources in order to launch meaningful policy actions (Sotarauta and Beer 2021). By joining these three literatures together, this dissertation aims to articulate a fuller understanding of the processes that change places and where actors are in this process.

What these three literatures show, in varying degrees, is that actors can have key roles in shaping policies within regions under duress and crises, and in many instances, actors perform critical functions such as directing its economic policy strategies (Bristow and Healy 2014a). Policy here refers to a purposive undertaking or “course of action intended to accomplish an end” (Hecl 1972: 84) proposed by an organization or an individual (Sotarauta 2020). Different actors like local governments, firms, universities, civic groups, step up and get involved (Rossiter and Smith 2017). This is particularly true in places struggling to be resilient during periods of uncertainty (Gong et al. 2020), austerity (Pike et al. 2018), deindustrialization and permanent loss of manufacturing jobs from plant closures (Bailey and de Ruyter 2015) and recessions (Cowell, Gainsborough, and Lowe 2016) and the aftermath of neo-liberal economic policies (Tödtling and Tripl 2018). Local actors act as place leaders, build coalitions with other actors, and persuade others to join collective efforts to transform places (Sotarauta and Beer 2021).

Place leaders are enabled and constrained by their specific local settings and constituted by structural factors such as institutions, social networks, and local environmental assets in responding to these economic woes and in forwarding their agendas (Benner 2019; Dawley, MacKinnon, and Pollock 2019). This suggests that spatially configured structures are important considerations in understanding how and why agency manifest in places. Understanding the role of actors and manifest agency in regional development becomes even more critical as many regions continue to face daunting economic uncertainties and instability. And yet, inquiries into the links between agency to the structural conditions of place and opportunities have only just begun (Grillitsch and Sotarauta 2020). This dissertation aims to interrogate how actors respond to place specific economic adversities as well as their involvement within place-based policy processes. Doing this entails examining how frameworks on resilience, agency, and place leadership in economic geography explain how and why agency manifest in light of economic crises. Each framework has relevant analytical apparatus to contribute to understanding the transformations of places, and taken together in this dissertation, they can say more.

Policy actions, however, operate in a complex social reality and, as such, constrained and limited by structures such as institutions. Institutions refer to rules or stable arrangements for individualized and socialized actions (Knight 1992; North 1991) and are pervasive in this social reality. Although there is consensus in economic geography that institutions, as the “rules of the game” (North 1991), generate these enabling and constraining dynamics, the precise effects of institutions on agency need to be further investigated in economic geography, especially in relation to how actors internalize institutions as bases for actions at the micro-level (Rekers and Stihl 2021). Institutions need to be more central to research inquiries on agency because as Sotarauta (2017) puts it “without in depth studies on how actors perceive institutions, reflect upon them, and either comply with them or aim to push for institutional change, it may be impossible to fully understand the true impact of institutions” (page 585). Furthermore, “there is a tendency to use the concept [of institutions] as a generic guide to identify the ‘rules of the game’ rather than as an analytical tool to investigate what actually frames the actions and decisions of actors” (Sotarauta 2017: 585). Thus, this dissertation aims to examine institutions more closely in relation to how they affect the decisions of actors in policy intervention, how spaces of actions emerge, and how actors navigate these spaces. This is done in a novel way in this dissertation by looking at micro-level institutions within organizations such as timing norms and term limits. By doing so, agency is situated in the constraints of time, which gives a better sense of how

structures like institutions influence human actions within the process of regional economic transformations (Grillitsch, Rekers, and Sotarauta 2021).

The burgeoning of the literature on agency, and its varied forms, such as place leadership (Grillitsch and Sotarauta 2020), has resulted in an incredible body of empirical evidence that mostly come in the form of case studies, such as the ones offered in this dissertation. The body of evidence on agency centers on how actors address the need to transform their localities, in different corners of the world, and from pluralistic sets of actors. However, these cases are heavily contextualized (Hassink 2019) and the dominance of case studies in place leadership have been criticized as generating niche cases (Broadhurst, Ferreira, and Berkeley 2021; Sotarauta and Beer 2017). Concerns have been raised whether this methodological practice is hindering the consolidation of the literature and learning from across cases from taking place, thereby inhibiting the accumulation of knowledge in this field (Beer and Irving 2021). There seems to be a need to take stock of what the literature on agentic forms like place leadership say about the context in which meaningful policy action for local economic transformations can take place. The empirical material from the place leadership literature is bountiful with case studies and offers an incredible opportunity to use novel methods in order to synthesize knowledge from it (Beer and Irving 2021). Thus, an aim of this dissertation is to reflect on and synthesize empirical evidence and knowledge from the place leadership literature regarding the specific contexts that enable the manifestation of agentic processes like place leadership. It also aims to answer the call for methodological innovation in studying place leadership (Beer and Irving 2021).

1.2 Research questions

Reflecting on the aims set forth above, this dissertation is particularly interested in the human in the geography. If places indeed matter, as economic geographers believe, then it must matter most to the people who live their everyday lives in these places and experience the world materially and socially through it. When a crisis hits and uncertainty ensues in a place, it affects people who call these places home the most. So much so, that some of them might be willing to stake a claim on its recovery and development through purposeful actions. Some of these actors and these actions have helped places overcome wicked developmental challenges, while other places continue to be beset with protracted economic decline where local actors find progress in development continually elusive. This raises the main research question of this

dissertation: **how and why do responses of local actors to economic crises vary across time and place?**

A question such as this is very large and can be unpacked into three smaller sub-questions. These three sub-questions will be explored and answered across the different papers.

1. How do agentic responses emerge and function in times of economic crises?

This first sub-question concerns the first part of the main research question: responses of local actors. What exactly are these responses of actors, how do these responses come about, what these responses look like, how do they function, and how are these responses related to economic crises? Raising this sub-question can reveal and explain variations in how actors approach local economic crises.

2. How does the temporality of agency affect the behavior of actors?

This second sub-question concerns the “across time” part of the main research question and delves into how temporal structures affect the behavior of actors, where these temporal constraints come from, how they affect the ability of actors to implement policies to transform places, and what, if any, actions they tend to incentivize. Raising this sub-question can reveal and explain the sources of variations in the responses of actors to economic crises.

3. Which context enable actors to pursue actions to transform a place?

This third sub-question concerns the “place” part of the main research question of this dissertation and delves into the place-specific contexts in which actors find themselves. These contexts are said to enable actors but which contexts are more or less conducive for enabling agentic processes? Raising this sub-question can reveal another source of variation of responses of actors to economic crises.

1.3 Structure of the dissertation

This dissertation consists of three articles. The first article is published in the *European Planning Studies* journal; the second is published in *Environment and Planning A: Space and Economy*, and the third article has been submitted to a peer-reviewed journal. A kappa or an introduction chapter precedes these three articles and discusses the theoretical and methodological underpinnings of this doctoral research project.

Chapter 1 of this kappa introduces the empirical subject central to this dissertation as well as some initial concepts and outlines the research questions. Chapter 2 examines the three literatures brought together in this dissertation: resilience, agency, and place leadership. Chapter 3 describes the empirical research project in full. Chapter 4 explains the research design and provides a discussion of the ontological and epistemological perspective of critical realism, the research strategies employed, namely, comparative case studies and QCA, and how data was collected. Chapter 5 provides an overview of the three articles. Finally, Chapter 6 concludes with a discussion on the contributions of this dissertation as well as suggestions for future research.

2 It takes three

There are three literatures brought together in this dissertation to constitute its theoretical backbone: resilience, agency, and place leadership. While these three literatures are not natural dance partners, they have found themselves together on these pages, partnering up in the different articles. How did they get here? The desire to understand how local actors responded to the parallel plant closures in Lund and Södertälje led to exploring the literature on the agency perspective in resilience because it looks at actors dealing with local economic crises. This is demonstrated in the first article. In going through the empirical material in this dissertation, the idea of time kept coming up during interviews. The need to make sense of where time figures in this story led to traversing literature using the agency perspective in exploring how institutions become sources of temporality that constrain the behavior of actors. This is explored in the second article. The stories of Lund and Södertälje are but two drops in the ocean of cases on agentic processes, and the need to reflect on what these cases mean for the question on the role of actors in regional economic transformations led to a desire to synthesize work on a specific form of agency – place leadership. This is done in the third article. While it may be surprising that these three literatures have found themselves together here, they do have significant things in common as well as points of dissonance. These issues are explored in this chapter.

This chapter opens with the structure and agency debate, the abstract foundation that runs through these three literatures. This is followed by a closer look at the state of the art in each literature stream, including what is known, what is missing, and what this dissertation brings to fill the gaps. It concludes with a discussion on the commonalities and points of dissonance between these literatures. This chapter poses one of the main contributions of this dissertation, that there is value in bringing these literatures together in forming a fuller, if more eclectic, understanding of how and why there are varied responses of local actors to economic crises.

2.1 The structure and agency debate

The link between human agency and structure has been extensively debated in philosophy and in the social sciences (Archer 2013; Sayer 1999). Structure refers to arrangements that limit and constrain actions (Archer 2002). They are frameworks that underpin all actors and actions that are embedded within social structures (Uzzi 1997). Agency is the capacity to act autonomously (Gregory et al. 2011) and is generally defined as purposeful, meaningful, and intentional action which includes even habitual action (Bristow and Healy 2014b; Simmie 2012). The debate on structure and agency concerns the development of a theoretical account of human beings acting in society and in turn, society influencing human beings. The tension lies in determining the extent to which structure and agency are components to social outcomes; in other words, how the causal powers of agency and structure function (Archer 1982). In most theoretical accounts in the social sciences, structure is a product of human actions, which then shape human beings and their interactions. “However, successive theoretical developments have tilted either towards structure or towards action” where one element becomes subordinate to the other (Archer 1982: 455).

This conceptual slippage either has structure as wholly independent, with human agents virtually having no role in its maintenance, or human beings as completely sovereign with no influence from structure (Archer 1982). Privileging either structure or agency has been heavily criticized as problematic because both structure and agency are requisite components of social phenomena (Sayer 1999). Perspectives that seek to resolve this issue examine both structure and agency, but these efforts are still contested (King 2010). The main disagreement lies in whether agency and structure are inseparable (Giddens 1984) or separable (Archer 2000; Bhaskar 2013). This debate is not inconsequential. The question on the divisibility of structure and agency has implications on how structure and agency are studied and how causal inference is made (Archer 2013).

While structures can be analyzed separately from actors and actions because this can be analytically fruitful in terms of unpacking complex ideas, structures, actors, and action are, in reality, always in play together at the same time (Archer 2000). Ignoring or ‘bracketing’ either structure or agency would be problematic, particularly in trying to explain a social phenomenon because structures have emergent powers and actors activate these emergent powers (Archer 1982; Bhaskar 2013). Emergent powers refer to the property of entities having causal influence that is irreducible to its parts (Elder-

Vass 2005) and “the capacity to modify the powers of its constituents in fundamental ways” (Archer 2000: 466). Actors are also said to be connected to structures through the interactions with their projects, enterprise, and agendas, and the constraints and enablers that constitute these structures (Archer 2003). When the realization of these projects, enterprise, and agendas are constrained by structures, it triggers another round in the iterative process of reflexivity done by actors in deliberating on strategies to overcome these constraints, accept other outcomes, or join other actors in pushing for change (Archer 2003). The reflexivity of actors suggests that there are structures that are separate, distinct and pre-figure agents and their interactions with these structures (Archer 1982). This is why both structures and actors are not two sides of the same coin. They are in fact two different coins, separable and distinct. In fact, this inherent interdependence of actors with structure has been a fundamental discussion in the social sciences and should continue to be part of conversations in economic geography (Grillitsch, Rekers, and Sotarauta 2021).

This rather abstract debate on structure and agency is playing out in economic geography (Jessop 2001; Barnes 1989), particularly in the three streams of literature selected for this dissertation for their conceptual currency in understanding the behavior of actors dealing with economic transformations, namely: resilience, agency, and place leadership. The resilience literature tends to put an emphasis on the system perspective where it is mainly the structural characteristics of regions that explain the ability of regions to recover from economic crises (Evenhuis 2020). The resilience literature acknowledges that agency matters but it is not yet central to its analytical frameworks (Bristow and Healy 2014a). Thus, the resilience literature tends to be tilted towards structure. The agency literature, on the other hand, focuses on actors and groups of actors and, while it insists upon paying attention to both actors and structural conditions (Steen 2016), more work needs to be done in fully articulating the interactions between actors and institutions at different scales (Grillitsch, Rekers, and Sotarauta 2021). Thus, in this way, the agency literature is tilted towards actors and their actions. Place leadership is a specific type of agency that focuses on the role of actors in convincing others to mobilize resources and enact collective action to transform places (Grillitsch and Sotarauta 2020). In the place leadership literature, both the characteristics of actors and their context are examined (Collinge and Gibney 2010). However, further work is needed in understanding which context enable this form of agency which, as of yet, is still unclear (Sotarauta and Beer 2021). Thus, the place leadership literature is tilted towards agency in this way. A deeper look into these three literatures and how these conceptual imbalances are addressed in this dissertation follows.

2.2 Resilience

“In a changing, volatile, and risk-prone world, one that is subject to seemingly ever more pronounced disruptions and disturbances, resilience, understood broadly as the capacity to cope with, and recover from, adverse shocks and events, has been held up as a key personal goal and social imperative” (Martin and Sunley 2020: 10). Resilience “is a property that is presumed to be present or absent on a more continuous basis and is about engaging and coping with change more generally”. (Evenhuis 2020: 3). It is not surprising then why resilience, as a concept, has found resonance in different disciplines including economic geography. There is, however, no one single definition of resilience but is instead, conceived of and debated in several ways (Bristow and Healy 2020a). The first definition, termed engineering resilience, focuses on how fast a system recovers from a shock and in returning to its equilibrium and is said to hue closely to approaches in mainstream economics using self-restoring equilibrium dynamics (Martin and Sunley 2020). The second definition, referred to as ecological resilience, focuses on a system’s absorptive capacity for shocks and the system’s potential to either bounce back or transform to a new state or equilibrium (Cretney 2014). This second definition is also said to be more in line with equilibrium dynamics in economics, albeit, multiple equilibria is possible (Hassink 2010).

The third definition of resilience involves “structural and operational adaptation in response to shocks”, referred to as evolutionary resilience, “defined in terms of ‘bouncing forward’ to new growth paths rather than bouncing back” (Martin and Sunley 2020: 14). This is said to be more in line with evolutionary economic geography where the transformation of an economic system does not have a pre-determined state (Hassink 2010). Finally, the fourth definition of resilience refers to a ‘system transformation’ where the scale of the disturbances is such that the system’s structures and functions are upended (Martin and Sunley 2020). “Definitions of regional economic resilience tend to merge and combine some of these fundamental definitions” and there is as of yet no consensus in the literature on one single definition of resilience (Martin and Sunley 2020: 15). It is argued though that resilience “should be seen as the ability of a regional economy to adapt in the face of disturbances” and should be “inextricably linked to the idea of adaptation” (Evenhuis 2020: 3).

The resilience literature distinguishes between two capacities for resilience, namely adaptation as already mentioned but also adaptability (Hassink 2010). “Adaptation is defined as a movement towards a pre-conceived path in the short run, characterized by

strong and tight couplings between social agents in place. Whereas adaptability is defined as the dynamic capacity to effect and unfold multiple evolution trajectories, through loose and weak couplings between social agents in place, that enhance overall responsiveness” (Pike, Dawley, and Tomaney 2010: 62). There is some disagreement on whether adaptation and adaptability should be dichotomized as different states since empirically, facets of both adaptation and adaptability can be present whilst undergoing the resilience process (Hu and Hassink 2017a).

Table 1. Features of the three literatures

| Features | Resilience | Agency | Place leadership |
|--|--|---|--|
| Authors | Martin and Sunley, Bristow and Healy, Evenhuis, Nyström, Wang and Wei, Diodato and Weterings, Fingleton, Garretsen, Hu, Hassink, Cowell, Holm, Ostergaard, Pike, Dawley, Tomaney, Ormerod, Tsiapa, Kallioras, Tzeremes, Gardiner, Tyler, Tan, Fröhlich, Hu, Ni | Bristow and Healy, Rekers and Stihl, Grillitsch and Sotarauta, Collinge and Gibney, Uyarra et al, Dawley, Mackinnon, Cumbers, Pike, Miorner, Fredin, Jogmark, Trippi, Isaksen, Steen, Asheim, Nielsen, Flanagan, Magro, Wilson, Pollock, Chapman, Jolly, Barnes, Horne, Jogmark, Coe, Jordhus-Lier, Garud, Karnoe | Sotarauta, Beer, Hu and Hassink, Irving, Clower, Horlings, Roep, Wellbrock, Broadhurst et al, Vallance et al, Rossiter, Smith, Suvinen, Nicholds, Gibney, Mabey, Hart, Vallance, Kempton, Tewdwr-Jones, van Aalderen, van Staden, Haslam Mckenzie, Jolly, and Benner |
| Main unit of analysis | systems, regions | actors, macro-level institutions | actors, context |
| Main level of analysis | macro | micro | micro |
| Key findings relevant to dissertation | Some regions are more resilient than others because of system characteristics. | Actors are instrumental in change processes in places. | Context enables whether actors will succeed in place leadership activities |
| Current gaps relevant to dissertation | Incorporating actors in the process of resilience, what the roles of actors in this process and looking, at microlevel institutions. | Role of microlevel institutions, paying more attention to temporality, understand role of actors in institutional change. | The exact conditions that enable place leadership, need synthesis of knowledge in the field and for methodological innovation. |

What is known

The resilience literature looks into different kinds of disturbances such as major plant closures (Nyström 2018; Ormerod 2010), and structural changes like deindustrialization (Cowell 2013) but its central concern has been macro-economic fluctuations (Wang and Wei 2021) such as recessions and business cycle expansions and contractions (Evenhuis 2020). The resilience literature finds that some places are more resilient than others (Diodato and Weterings 2014) because they have the

necessary pre-conditions to buffer economic crises (Martin 2018). The ability of these economic systems to resist disturbances depends on undertaking necessary adjustments and adaptations to mitigate risks from shocks (Martin and Sunley 2020). This process also depends on the severity of the crises and on factors such as regional economic and industry structures (Sunley, Gardiner, and Tyler 2016). Recent empirical findings show some factors and characteristics that are said to define the adaptive capacity of economies (Nyström 2018; Tan et al. 2020) as rates of unemployment, industrial structure, size of the region, education, and local amenities and assets (Nyström 2018; Holm and Østergaard 2015). Path dependence has also been found to be a determinant of resilience outcomes (Tsiapa, Kallioras, and Tzeremes 2018). Path dependence refers to inheritances from the past contributing to present economic trajectories such as skills, knowledge, and institutions (Grillitsch and Rekers 2016b).

What is missing

“One of the fundamental developments of the field of regional economic resilience over the past decade has been the recognition of the importance of agency in shaping resilience outcomes” (Bristow and Healy 2020a: 4). Despite concerns that the agency perspective is stretching the concept of resilience too far (Fröhlich and Hassink 2018), this development is considered as progress in the field (Bristow and Healy 2020b) given that “the actual process of adaptation and the capacity for resilience will importantly be a function of the responses of the firms, workers, financial institutions, governments, associations, and other actors, within a regional economy” (Evenhuis 2020: 3). And yet, “empirical research into the role of decision making by firms, households, public authorities, and other actors on regional economic resilience remains sparse and is largely implicit in most analyses” (Bristow and Healy 2020a: 4) in the resilience literature. Using an agency perspective that requires looking at actors will also need to be accompanied with a micro-level perspective on the structures that constrain actors such as institutions. Institutions has long been neglected as a critical component in explaining regional economic resilience (Hassink 2010; Pike, Dawley, and Tomaney 2010). “Incorporating an agency perspective requires a stronger appreciation of what shapes behavior, and how agents make decisions under conditions of uncertainty. This highlights the contextual significance of place and time and suggests that appreciation of regional economic resilience cannot be constrained to search for structural determinants alone” (Bristow and Healy 2020a: 5).

This dissertation addresses this gap by using the agency perspective in conducting a study of resilience in two regions whilst paying attention to institutions and was

inspired by the seminal article of Bristow and Healy (2014a) on this topic. The analysis centers on actors and their decision-making process in initiating responses to two plant closures in Sweden. Under examination were also actors' roles in fomenting adaptation and adaptability, region-specific institutions that affected decision-making processes in engaging in policy initiatives as a response to the closures, and micro-level institutions that constrained and enabled these responses. This dissertation contributes an account of regional economic resilience that does not depend on the characteristics of a system alone but instead locates the meaningful intentions and deliberate actions of groups of individuals who identified opportunities and threats to their local circumstances and acted accordingly. They pooled together their organizational resources in order to mobilize efforts in managing the uncertainties that economic disturbances like plant closures tend to bring. Moreover, by using an agency perspective, this dissertation contributes to addressing the literature's conceptual tilt towards structure when studying the social phenomena of resilience and demonstrates a more balanced treatment of both structure and agency.

2.3 Agency

Agency is generally defined as purposeful, meaningful, and intentional action which includes even habitual action (Bristow and Healy 2014a; Simmie 2012). Agency is also said to be contingent and situated in both time and place (Grillitsch and Sotarauta 2020). One definition, to which this dissertation subscribes, defines agency as a “temporally constructed engagement by actors of different structural environments which, through the interplay of habit, imagination, and judgement, reproduces and transforms those structures in interactive response to the problems posed by changing historical situations” (Emirbayer and Mische 1998: 970). Agency involves “adjusting initial conditions and constructing capacities” for a variety of place-based activities (Fredin, Miörner, and Jogmark 2019: 799). Agency can manifest in several different levels. There is individual agency of unitary actors and collective agency, referring to the agency of a group of actors (Coe and Jordhus-Lier 2011). Firm level agency refers to industry actors who start their own companies and foster innovation while system level agency are actions to support economic restructuring at the system level (Isaksen et al. 2019).

There are also different types of agencies. Distributed agency refers to actions enacted by different actors (Garud and Karnøe 2003). There is agency that reproduces and maintains structures (Coe and Jordhus-Lier 2011) while there is also transformative

agency which refers to actions that seek to shape places according to the interests of actors (Horlings et al. 2020). Transformative agency is further unpacked into the trinity of change agency which are actions geared towards the emergence of a regional growth path: innovative entrepreneurship, institutional entrepreneurship, and place leadership (Grillitsch and Sotarauta 2020). Innovative entrepreneurship are sources for “new industrial specializations” which “often require institutional change” in the form of institutional entrepreneurship, and these transformations need place leadership to organize actions from different actors and mobilize resources to benefit both actors and regions (Grillitsch and Sotarauta 2020: 708). Despite these variations in typologies used in economic geography, they share the quintessence of agency – purposive and intentional actions, differentiated by context, and engaged in local economic development.

What is known

Agency research seeks to understand the role of actors at different scales and in differing degrees of embeddedness in the process of new industry and path creation (Dawley et al. 2015; Fredin, Mörner, and Jogmark 2019; Hassink, Isaksen, and Trippel 2019). The specific roles of actors in transformations of old industries towards aspirations for sustainability and clean technologies are also investigated (Jolly, Grillitsch, and Hansen 2020; Sotarauta and Suvinen 2019). These processes of change encounter agency as exogenous sources of non-local knowledge (Trippel, Grillitsch, and Isaksen 2018), initiators of new path creation (Isaksen et al. 2019), drivers of local transformations (Wink et al. 2017) but also obstacles to internalizing local conditions in improving policy formulation (Bellandi, Plechero, and Santini 2021; van Grunsven and Hutchinson 2016).

As a perspective, agency is also used as a bridging concept to study institutions in combinatorial knowledge dynamics (Sotarauta 2017) and in research on strategic coupling in regions, to study the concerted effort by political actors to attract private capital and connect regions to global production networks (Dawley, MacKinnon, and Pollock 2019). Moreover, when policies, like ‘smart specialization’, are understood as exercises in actor alignment in shaping regional development, the concept of agency is demonstrated as an indispensable tool in interrogating the depth of strategies involving coalitions of actors as well as place-based conditions as enablers and constraints (Sotarauta 2018; Trippel, Zukauskaite, and Healy 2019). This body of work demonstrates the long reach of actors within processes of regional transformations and the construction of regional growth paths, with their fingerprints leaving indelible

marks on place-based economic activities. As such, it is necessary to go into further detail who are the actors engaged in regional development processes, what their nature is, what are the institutions that inhibit and enable them, and how do these institutions change over time.

2.3.1 Actors

Actors found to engage in regional economic development processes are firm and non-firm actors (Fonseca et al. 2021). Actors like universities have been shown to be taking on a more entrepreneurial role in spurring innovation across different localities with activities such as initiating incubation hubs and creation of spinoffs to encourage the commercialization of research (Benneworth, Pinheiro, and Karlsen 2017) and forming new industries (Tanner 2014). These higher learning institutions have also been active in responding to post-industrialization in former manufacturing cities by fostering clusters in industries like biotechnology to help places to adapt economically (Smith, Rossiter, and McDonald-Junor 2017). Universities have also been tasked with running living labs for experimentation, reimagining future scenarios of places in order to direct future development plans (Chatterton et al. 2018; Vallance, Tewdwr-Jones, and Kempton 2019). Empirical evidence shows that there is an increasing role universities take on in order to actively participate and intervene in the economic development processes of their localities (Fonseca et al. 2021).

Local governance bodies, such as regional development agencies, municipalities and city councils, and business networks are also increasingly taking up active roles in economic transformations, sometimes even beyond the prodding of national governments (Chaminade et al. 2019). Much like universities, regional development agencies have been active at shaping for places and funding local initiatives aimed at encouraging agglomeration of key industries (van Staden and Haslam McKenzie 2019) or embarking on developing new paths in clean technology industries (Sotarauta and Suvinen 2019). Conversely, the abolition of regional development agencies in places like the UK have been shown to have stalled gains and undermined progress made in places dependent on these organizations for economic policy guidance and facilitation (Broadhurst, Ferreira, and Berkeley 2021; Pike et al. 2018).

Local governance units like municipalities and city councils have also attempted to steer economic policy through various development interventions (Hermelin and Trygg, 2021) including attempts in diversifying industries in the face of imminent resource

depletion (Hu and Hassink 2017b) or using locational assets such as proximity to larger economies (van Grunsven and Hutchinson 2016; Wink et al. 2017). Business networks like chambers of commerce or other professional organizations have also taken more transformative roles in the process of upgrading industries for more value-added activities, such as, for example, in the transformation of the paper and pulp industry in Central Finland to a more advanced bio-economy (Sotarauta and Suvinen 2019). Another example is a small close-knit circle of industry actors in the Eyre Peninsula in Australia attempted to transform their local seafood industry in order to circumvent imminent resource depletion (Kroehn, Maude, and Beer 2010).

While many of these actions are coordinated through organizations, it must be noted that “organizations can be approached as institutionalized structures that by themselves do not produce intentional, purposive, and meaningful actions – human individuals do” (Grillitsch and Sotarauta 2020: 709). Indeed, human beings are embedded in organizations and shape, organize, and manage its resources. Individuals in leadership roles of these organizations decide on explicit commitments on how to distribute, allocate, and mobilize resources towards different ends. Some of these commitments are made outside traditional policymaking spheres and without steering (Sotarauta and Mustikkamäki 2015) and are shaped from the individual’s own advocacies (Smart and Sturm 2013). Thus, if human beings can have profound influence on how organizations commit resources and pursue actions, then it is necessary to discuss how human beings operate, how they make decisions, and why and when they decide to act. This line of inquiry leads to one of the oldest and most fundamental debates in the social sciences: what is the nature and disposition of human beings, or ‘agents’, or ‘actors’ as it has been used interchangeably in this dissertation.

2.3.2 Nature of actors

According to the homo economicus view of man, human beings are, by nature, utility-maximizing in pursuit of their interests and infinitely rational in their decision-making. However, this description has been challenged in philosophy and in the social sciences as overly reductionist (Bhaskar 2013; Maskell and Malmberg 2007). According to critical realist Archer (2015), homo economicus is a “lone, atomistic and opportunistic bargain hunter” and represents an impoverished version of human beings (page 12). Furthermore, scholars argue that actors have ‘bounded rationality’ and do not process pay offs as narrowly in the way economists say they do. Human beings, instead, are said to not be completely rational and have significant cognitive limitations in processing information, and routinely perform actions that are not utility-maximizing (Mahoney

and Thelen 2009). Humans are also said to be concerned with abstract notions such as dignity and charity which shows that humans are not only and always self-interested (Stanfield 2006).

Beyond this debate between homo economicus vs. bounded rationality is the more nuanced conception of the nature and disposition of human beings by Margaret Archer (1982). Human beings are said to have a sense of self, an awareness of their own mind, body and environment, fostered by internal conversations with oneself and others (Archer 2002). This internal conversation is where reflexivity occurs, and in which humans take different things into consideration, such as their needs, desires, aspirations, and their social circumstances (Fleetwood 2008). This reflexive disposition includes mulling over experiences and emotions in order to form 'projects' or 'enterprise' that they believe will achieve their desires (Archer 2003). Projects or enterprise, here refer to anything that human beings desire. It can be a utility-maximizing goal, it can be charity, or it can be doing something harmful and irrational. This reflexivity is iterative, that is to say, these deliberations and internal dialogues are made repeatedly as actors encounter the social world through their various projects. Human beings assess their prospects from these encounters and use these circumstances to form their strategies on how to overcome hindrances to achieving what they want or deliberate on what they are prepared to accept as other alternatives (Archer 2003). Importantly, these deliberations are always fallible, a significant distinction from the perfectly rational-thinking homo economucus. Fallibility here means that when humans deliberate, they can always get it wrong (Bhaskar 2013).

2.3.2.1 A sense of time and place

The reflexivity of actors includes a sense of time and place. The sense of time is discussed first. The reflexive process includes mediating the past, present, and the future in terms of orienting their behavior and manifestations of their social engagement (Emirbayer and Mische 1998). The past tends to be constituted by habits, routines, practices, and heuristics for decision making that actors use (Bourdieu 1977). The future is where actors project and imagine possibilities. The present is where actors exercise the capacity to "contextualize past habits and future prospects within the contingencies of the moment" (Emirbayer and Mische 1998: 963). This is why it is important to examine actors situated in the flow of time (Grillitsch, Rekers, and Sotarauta 2021) because time itself affects how actors behave and make decisions. Time is a reference to how actors structure their lives (Dille and Söderlund 2011). Actors

sometimes privilege one or more of these time orientations at different occasions and under different circumstances when making decisions. Actors use this sense of the temporal to internalize time as a basis for action (Grillitsch, Asheim, and Nielsen 2021). They imagine the prospects and expectations for the future based on their interpretations of the past and understanding and awareness of the conditions of the present (Steen 2016). This inter-temporal outlook informs the deliberations within the internal dialogues human beings have and play out in the strategic choices and decisions actors take. It affects the assessments actors make in terms of what needs to be changed and to what extent and in what ways (Kaplan and Orlikowski 2013). In turn, this shapes the temporal rhythm and form of their actions and sets up the parameters of how human action and practices are performed (Orlikowski and Yates 2002).

Along with this temporal sense, the reflexivity of actors also includes a sense of place which refers to human interpretations of their physical settings through the process of experiencing a place (Stedman 2003). A sense of place is fostered by living and being present in it (Sotarauta 2020; Entrikin 2018). This sense of place participates in the deliberation process as human beings consider their circumstances, the material conditions they live in, and how they imagine what they want and where, and decide on the strategies on how to achieve these projects. Their sense of place includes identifying with places, their aesthetics, their landscapes and terrain, and their histories (Entrikin and Berdoulay 2005). Agents form attachments and affections for places and affinities to its communities, which can manifest as collective and political identities (Entrikin 1999). Moreover, actors tend to set up and subscribe to spatial, cultural, social, and cognitive boundaries with their economic activities pinned down to geographical locations (MacKinnon, Cumbers, and Chapman 2002). Another way of putting this, is that actors tend to be rooted and embedded in particular geographical and socio-cultural context (Rutten and Boekema 2007). As such, histories, norms, social codes, consensus, expectations, and circumstances of places, become part of the general cognitive frame of their reflexivity. Actors emboss this sense of place onto their perspectives, and their imaginaries of possibilities of projects they want and can have.

2.3.2.2 Social but conflict prone

As previously stated, the reflexivity of human beings involves internal dialogues with themselves but it also includes dialogues with other reflexive human beings (Archer 2003). Because actors are social and relational in this way, they form an understanding

of the world based on how their groups also understand the world (Bristow and Healy 2014a). When actors are embedded within social groups (Granovetter 1985), they can experience, and understand circumstances in meaningfully shared ways. This suggests that within the reflexive process, interpretations of experiences are shaped and amplified through group dynamics (Archer 2013). Moreover, when a chosen project by an actor is constrained or enabled, as it inevitably happens when it encounters the social world, actors deliberate on what course of action to take up next (Archer 2003). These are “deliberations that determine what we will make of the constraints and enablement we confront, what opportunity costs are we prepared to pay, and whether we consider it worthwhile joining others in the organized pursuit of change or the collective defense of the status quo” (Archer 2003: 52). This suggests that the range of possible actions to take in pursuit of a project includes the possibility of a social response and collective action.

This collective action is observed empirically in the economic geography literature wherein actors form coalitions and alliances in order to forward common interests (Bristow and Healy 2015, 2020b). Although these alliances can be temporary, likely to change in constitution and motivation over time, and be based on contingent factors, they can be quite potent in enacting changes (Dawley, MacKinnon, and Pollock 2019; Grabher 2002). So potent that the social relations that actors have can foster cooperation and create economic value (Yeung 2005; Bathelt and Glückler 2003; Boggs and Rantisi 2003). These social relations are however characterized with unequal power and internal struggles over interests between actors (Leitner and Sheppard 2002; Sunley 2008). These internal struggles over interests underscore the fact that human beings have their own motivations and agendas for doing things, and importantly, these agendas can be conflictual with other agendas of other actors (Bristow and Healy 2020b).

Agendas refer to the interests that motivate actors to select choices that advance their cause (Mahoney and Thelen 2009). These agendas are not unlike the projects or enterprise that actors pursue that Margaret Archer (2003) postulates. Formally, agendas represent different endeavors and preferences of individuals that can be shared or aligned with others (Sheingate 2009). However, agendas connote an implicit social dimension to them in that agendas are often discussed in relation to, or more accurately, in conflict with other agendas (Bristow and Healy 2020b). More often than not, agendas do not align or coalesce, particularly when it involves the designation, distribution, and allocation of resources (Sheingate 2009). Given the scarcity of these

resources, some agendas are inevitably, privileged over other agendas (Nicholds et al. 2017). Not only do distributional conflicts arise as a result but processes of setting the terms of the distribution of resources become contested (Knight 1992). Distribution of resources are typically arranged around power and so actors tend to seek power when they want to influence the allocation and distribution of resources (Knight 1992). A lack of parity over resources, and the corresponding power and ability to access and distribute resources are important considerations regarding the behavior of actors (Mahoney and Thelen 2009). Since agendas can be conflictual, this becomes part of the deliberations of actors on how and whether it is possible to coalesce these agendas in order to collectivize (Nicholds et al. 2017).

2.3.3 Institutions

Agency and economic actions are deeply intertwined with structures such as institutions (Granovetter 1985). The “economic landscape cannot be fully understood without giving due attention to the various social institutions on which economic activity depends and through which, it is shaped” (Martin 2000: 77). Institutions are “the rules of the game in a society” and are “humanly devised constraints” (North 1991: 3). Institutions can be formal such as laws, rules, and regulations. It can also be informal like social norms, taboos, and codes that regulate human conduct, actions, and behavior. Institutions are social in that it regulates, makes possible, and affects the social life of actors and the extent by which they relate and interact with one another (Knight 1992). By and large, there is consensus in economic geography that institutions matter for regional development (Rodríguez-Pose 2013; Rodríguez-Pose 2020).

Institutions are studied from the varieties of capitalism literature to examine institutions at the macro or national level (Hall 2001). Regional development studies have also used the macro level ‘quality of institutions’ approach to assess the institutional environment that underpins regional economies (Keefer and Knack 1997; Rodríguez-Pose 2013; Rodríguez-Pose 2020). Institutions are multi-scalar and constrain actors at different levels (Grillitsch and Rekers 2016a). As such, micro-level institutions, such as the ones within organizations in which actors are embedded, must also play a role in limiting actors (Rekers and Stihl 2021). One of the challenges of empirically analyzing the role of actors in the transformation of places is figuring out how to “to carve out the role of individuals from that of informal groups, networks, and organizations” (Grillitsch and Sotarauta 2020: 709). Grillitsch and Sotarauta argue “organizational routines and resources as well as enacted functions and goals imply that individuals occupying certain positions need to be seen in their respective organizational contexts” (Grillitsch

and Sotarauta 2020: 709). Actors, however, are only temporarily ensconced in these roles and positions, because they are often subject to term limits.

2.3.3.1 Term limits

Term limits refer to rules on the particulars of how long an actor can occupy a position (Schedler and Santiso 1998) and delineate the expanse of the mandate of actors whilst in position within an organization. These rules demarcate spaces for agenda setting powers and specifies when these powers have to be transferred to a successor (Mahoney and Thelen 2009). One important feature of the rules of term limits is that the possibility of renewing and extending term limits generates different incentive structures for the behavior of actors. A term that is renewable through an election incentivize actors to try to win in the next election to retain their political mandate (Schedler and Santiso 1998). Trying to win in the next elections further incentivize certain strategies in the current term because voters can ‘punish’ the candidate by not re-electing them if actors do not perform as expected (Persson, Roland, and Tabellini 2007). Attempts for re-election lead actors to pursue visible projects that expand public expenditures. This behavior is observed and referred to as the ‘political business cycle’ from the political economy literature (Klein and Sakurai 2015).

Since projects need opportunity spaces for actors to take action (Grillitsch and Sotarauta 2020), term limits constitute an important temporal dimension of this space. This is because actors internalize time as a basis for action (Emirbayer and Mische 1998). This inter-temporal outlook becomes part of the reflexive process where actors deliberate on the ways in which things can be achieved (Kaplan and Orlikowski 2013) and help them formulate their strategies. Moreover, term limits carry incentives for particular actions to be taken (Meinke and Hasecke 2003) with regards to policy choices (Besley and Case 1995). For example, empirical evidence from the political economy literature shows that actors subject to general term limits tend to favor augmenting public spending (Erler 2007) while leaders with only one term tend to support policies that reflect personal advocacies (Smart and Sturm 2013). Actors who can renew their terms through re-election tend to pursue policies that are popular to their voter base (Schedler and Santiso 1998).

2.3.3.2 Timing norms

Term limits are but one example of institutional structures referred to as timing norms which are “shared, expected patterns of paced activity” (Ancona et al. 2001: 648) created by human beings in order to provide “common understandings of timing, sequence, and duration of activities” (Granqvist and Gustafsson 2016: 1009). According to organizational studies scholars, timing norms can take the form of different temporal structures like schedules, and deadlines. When actors are part of an organization, this typically involves adhering to the norms within an organization and this includes, abiding by its timing norms (Granqvist and Gustafsson 2016). The extent to which this adherence happens depends on the position actors occupy within an organization. In other words, organizations align the actions of actors partly because joining an organization entails opting into timing norms existing within and across organizations, to differing extents (Dille and Söderlund 2011). Following the course of timing norms, in turn, reproduces and produces other timing norms such as timeframes that are socially constructed by actors so that it aligns with larger and more dominant timing paradigms.

One key premise to studying timing norms is that the behavior of actors is treated as meaningful and paced sequences of events rather than isolated occurrences (Ancona et al. 2001). Timing norms govern the actions of actors because they are the bases for the paces, cadence, and periodicity in the way actions are carried out. As previously discussed, since actors have a sense of time, timing norms are encountered by actors as social constraints and enablers for their projects. As such, time itself becomes a scarce resource to manage (Emirbayer and Mische 1998) in pursuing what they want and must be used productively (Erickson and Mazmanian 2016). The lack or abundance of time, as set by timing norms, must then be part of the reflexive deliberations actors make in assessing constraints and determining courses of action. As such, actors strategize on how to synchronize their activities to help them navigate these timing norms while pursuing their desires. These strategies also include attempts to overcome the constraints imposed by timing norms and institutions, in general.

2.3.3.3 Institutional change

The tendency of actors to attempt to overcome the constraints imposed by institutions is probably why contemporary scholars in economic geography are also interested in institutional change, particularly in how it relates to changes in industrial paths and local economic trajectories, and the development of regional governance institutions

(Gong and Hassink 2019; Hermelin and Persson 2021; Hu and Yang 2019; Zukauskaitė, Trippel, and Plechero 2017). There are four strategies that actors use in attempting to change institutions: displacement, layering, drift, and conversion (Streeck and Thelen 2005). “Displacement: the removal of existing rules and the introduction of new ones. Layering: the introduction of new rules on top of or alongside existing ones. Drift: the changed impact of existing rules due to shifts in the environment. Conversion: the changed enactment of existing rules due to their strategic redeployment” (Mahoney and Thelen 2009: 15-16). These typologies of institutional change have made its way into the economic geography vernacular even though it was originally from the seminal work of Mahoney and Thelen (2009) from the historical institutionalism literature.

Institutions tend to be sticky and durable (Gertler 2010) and as such, processes of institutional change take considerable time to emerge (Benneworth, Pinheiro, and Karlsen 2017). Policy initiatives often require institutional change, that is adjustments, revisions, reinterpretations, transformations, and mediations of existing rules within organizations (Lawrence, Suddaby, and Leca 2011). This is why agency also involves attempting to support and actively engage in institutional change (Grillitsch and Sotarauta 2020) and is one of the objects of action that actors target. Layering, in particular, has been empirically evident in studies on changes in governmental arrangements, reform, and path dependency (Evenhuis 2017; Li, Notteboom, and Jacobs 2014). Empirical evidence also shows that institutional layering has been used in developing new paths (Miörner and Trippel 2017), in creating regional development offices and science parks (Hermelin and Persson 2021), as well as in policies aimed at overcoming resource depletion (Hu and Yang 2019). Pre-conditions in places can shape the types of institutional layering necessary to spur change (Moodysson and Sack 2018).

What is missing

The agency perspective needs to deepen its knowledge on institutions in three particular areas. Firstly, more empirical evidence is needed in showing how micro-level institutions affect actors engaged in regional development activities (Rekers and Stihl 2021). Much of the work on institutions in economic geography have been at the macro-level despite the fact that institutions affecting agency are multi-scalar in nature (Grillitsch and Sotarauta 2020). As a consequence, “critical micro-dynamics that have to do with learning and agency” tend to be missed (Karnøe and Garud 2012: 734). Secondly, although it is known that the nature of actors include a sense of time and

place that inform their decisions and actions (Emirbayer and Mische 1998) and widespread acknowledgement that any process involving “agency is said to be spatially and temporally variegated” (Coe and Jordhus-Lier 2011: 218), the temporality of agency needs more attention (Steen 2016). Doing so would involve heeding “calls for a conceptual framework that is time sensitive, actor oriented, and geared to specify the temporal relations...” (Grillitsch, Rekers, and Sotarauta 2021: 308).

Looking at the temporality of agency and being more time sensitive involves examining actors’ expectations and visions for the future which inform the intentions of actors (Grillitsch, Asheim, and Nielsen 2021) but also how they navigate different temporal structures. Thus, sources of temporality that constrain the behavior of actors is potentially an important factor in explaining how actors engage with regional transformation processes. Thirdly, the role of actors in institutional change needs to be better understood (Uyarra et al. 2017) given how institutional change is often necessary in transforming local economies (Grillitsch and Sotarauta 2020). “There remains a need to dig deeper into how actors relate to institutions, and in particular, develop a better understanding of the intentions and strategies of these actors, and the ways they come together (or into conflict) with institutional arrangements” (Uyarra et al. 2017: 561) and why and how they attempt to shape them.

In order for this dissertation to address the first gap, a comparative case study on actors engaged in regional economic development activities is done in order to contribute more empirical evidence on how micro-level dynamics affect actors. In order to delve deeper into institutional dynamics, this dissertation looks beyond region-specific institutions and focuses on micro-level institutions, which are rules within organizations, in which actors are embedded, that constrain how actors respond to economic crises. Specifically, timing norms such as term limits that demarcate the length of time a person can occupy leadership positions within an organization. Term limits become sources of temporality that constrain actors’ engagement with policy initiatives. Thus, looking into how term limits affect the behavior of local actors addresses the second gap on the need to pay more attention to the temporality of agency. In this dissertation, paying more attention to the temporality of agency means locating emergent temporal structures at the level of the actor and attempting to understand how they influence agentic processes. Actors are, however, not mere passive subjects of these temporally oriented institutions. This is why this dissertation also looks into how actors engage in activities that attempt to foment institutional change, and how and why actors shape timing norms, addressing the third gap identified in the

agency literature. Specifically, this dissertation examines the strategies of actors in attempting layering in trying to adjust institutions within organizations but also their incentives and motivations for institutional change. Addressing the three gaps in the agency literature contributes to deepening the treatment of structure in the agency literature and reducing the conceptual tilt towards agency in this literature.

2.4 Place leadership

One form of agency, as previously stated, is place leadership (Grillitsch and Sotarauta 2020). “Research on leadership has experienced rejuvenation and metamorphosis over the past 40 years” (Sotarauta and Beer 2021: 2). As a field of study, leadership has gone from questions on whether it matters to focusing on charismatic individuals as well as leadership styles (Sotarauta and Beer 2021). More contemporary research on leadership in economic geography goes beyond focusing on individuals and styles of leadership and instead examines place leadership as a collective behavior – that is actors and the roles they take in attempting to deliberately change situations in their places to chart new paths (Beer, Weller, et al. 2019). Scholarship on place leadership rose in the early 2000s and further grew as a result of research collaborations in edited volumes and special issues in journals such as *Regional Studies* and *Local Economy* (Beer, Sotarauta, and Ayles 2021). Place leadership research in economic geography is still considered to be very young, however, and is said to need further empirical evidence and conceptual specificity (Hu and Hassink 2017b).

Formally, place leadership is defined as the “mobilization and coordination of diverse groups of actors to achieve a collective effort aimed at enhancing the development of a specific place” (Sotarauta 2021: 152). Varied situations such as a pandemic, post-industrialization, plant closures leading to loss of manufacturing jobs, and fears of resource depletion tend to precipitate uncertainty and trigger the impetus to take on changes and plans for transformation. Place leadership “captures actions that aim at transforming particular places by pooling competencies, powers and resources to benefit both agents’ individual objectives and a region more broadly” (Grillitsch and Sotarauta 2020: 5). It adds an alternative lens by which regional development can be studied and analyzed with a focus on actors (Sotarauta, Beer, and Gibney 2017).

Place leadership, as a type of agency, appears at different levels of places and sometimes beyond its boundaries and goes by many names: city leadership, regional leadership,

place-based leadership, and even placeless leadership (Hambleton 2015). Moreover, place leaders typically do not work alone and instead prefer to bring different actors together in coalitions. Place leadership operates between different actors underpinned by economic and social forces amid specific place-based conditions (Sotarauta 2021). “Models of place-based leadership show that it is one made of collaboration, shaped by context, and transformative rather than transactional” (Broadhurst, Ferreira, and Berkeley 2021). While place leadership is highly contextual and exhibit variations in place specific conditions, patterns of place leadership can have meaningful similarities (Beer, Ayres, et al. 2019; Beer and Clower 2014). Beer et al (2019) demonstrated these meaningful similarities in their study of 12 case studies of place leadership from six countries. They found, for example, that there are significant commonalities in the roles that actors take in responding to economic uncertainties (Beer, Ayres, et al. 2019).

What is known

Place leadership has been found to contribute to the degree of success of places (Anderton 2017; Beer and Clower 2014; Hu and Hassink 2017a; Sotarauta and Beer 2021; van Aalderen and Horlings 2020) but also to its inadequacies (Bellandi, Plechero, and Santini 2021). Place leadership can positively influence new paths for regional development, but it can also lead to negative effects or its “dark side”, particularly when the development strategy is held hostage to the interests of a few powerful actors (Bellandi, Plechero, and Santini 2021). The dark side of place leadership refers to leaders who intentionally hinder the development of new paths by misdirecting priorities in the path development strategy. Moreover, there are also examples of local governance bodies who block local policies from emerging because directives from a national government are so strongly entrenched among local leaders who want to follow them, and so much so that place leadership end up creating policies that are completely mismatched to places (Gherhes, Brooks, and Vorley 2020). This has led to more scrutiny on the degree of actual decentralization and devolution, particularly on how place leaders manage their respective localities (Ayres, Flinders, and Sandford 2018; Pike et al. 2018). This has also engendered calls for strengthening horizontal relationships between actors instead of the vertical ones between local and national government bodies (Sotarauta and Beer 2017), as well as genuine empowerment for local leadership (Gherhes, Brooks, and Vorley 2020).

Research on place leadership in economic geography explores how varied sets of circumstances, tethered to a place, influence actors in leadership roles (Sotarauta 2009). This body of research includes examining change agency in cases of sustainable

transitions (Sotarauta et al. 2020) and how degrees of regional devolution can create uneven conditions for policy intervention (Hu and Hassink 2017a). This research also examines how actors fare in establishing cluster programs and smart specialization (Chaminade et al. 2019; Benner 2019; van Staden and Haslam McKenzie 2019) or more experimental platforms and initiatives (Chatterton et al. 2018; Horlings, Roep, and Wellbrock 2018; Vallance, Tewdwr-Jones, and Kempton 2019). The contribution of these case studies have been emphatic in showing that place leadership is critical not just to the transformation of places (Beer and Irving 2021) but also in understanding the interactions of actors with formal and informal institutions (Horlings, Roep, and Wellbrock 2018). This strand of the literature demonstrates the action and inaction of actors, with varying degrees of power and resources, within places undergoing adjustments, decline, and development. In doing so, place leadership shows the complex nature of collective action in specific contexts (Sotarauta and Suvinen 2019).

What is missing

It is widely acknowledged in this literature that “place leadership is not only interested in what leadership is like but also the context it is embedded in...” (Sotarauta and Suvinen 2019: 1749). Although place leadership scholars are doing important work in addressing how to unpack context that enable place leadership, for example, Broadhurst et al (2021) identifies common conditions for sub-national governance structures in England, more work is needed to uncover the factors and conditions that enable place leadership to manifest (Beer and Clower 2014). As such, there is consensus that “more research is needed to establish what kind of local and regional contexts” enable manifestations of place leadership, “including conditions that suppress or hinder the surfacing of place leadership” (Sotarauta and Beer 2021: 11). Moreover, “it is still unclear how this mode of collective leadership can be reproduced in widely varying institutional systems across different territories, and especially in those regions where inclusive practices of collaborative governance is not already established” (Vallance, Tewdwr-Jones, and Kempton 2019: 1723).

This dissertation addresses these gaps by finding the different context that enable place leadership to manifest. This involves unpacking context into the precise conditions that actors contend with whilst engaging in local transformative actions. This is done by synthesizing the empirical findings from the body of work on place leadership. The place leadership literature is incredibly rich in case studies that are thick with description and generous in detail (Beer and Irving 2021). As such, there is an opportunity here to take stock of what these case studies, such as the ones conducted

in this dissertation, offer in terms of how to understand local actors engaging with economic transformations. Thus, this dissertation offers a synthesis of the empirical evidence on the most common conditions scholars have found that enable this form of agentic action. Doing so contributes an accumulation of knowledge on the conditions that enable place leadership to manifest, from the extant literature. Addressing the identified gap above also contributes to minimizing the conceptual tilt towards agency in the place leadership literature because it deepens the discussions and explanations regarding structures that enable agency.

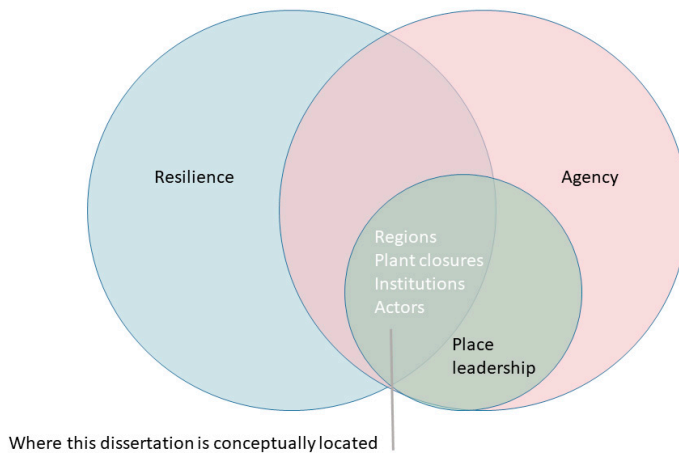
2.5 Commonalities and dissonance

There are commonalities between the conversations on resilience, agency, and place leadership that make it possible to bring them together in this dissertation. There are, however, also points of dissonance between the literatures that make bringing them together challenging. First, on the commonalities. The literatures on resilience, agency, and place leadership share an interest in a fundamental question in economic geography: why do some regions develop more prosperously than others? This interest is qualified and expressed in varying ways in each literature. In the resilience literature, questions on why some regions manage shocks better than others (Nyström 2018) or what factors determine regional economic resilience (Wang and Wei 2021), tend to be raised. In the agency literature, the question on “why do some regions grow more (or less) than others with similar structural preconditions?” (Grillitsch and Sotarauta 2020: 705) is brought up. In the place leadership literature, scholars ask what is the context that enable place leadership to manifest (Collinge and Gibney 2010). These questions indicate that these literatures agree on the need to understand which conditions lead to developing economies, and how and why these processes come about.

Moreover, these three literatures share an interest in regions or territorial architectures that contain structures such as institutions and other factors that may constrain and enable economic development. Regions, in particular, have enjoyed a prominent place in economic geography as an object of research focus. Economic activities and transactions that accumulate in particular locations are at the core of the questions of the field and regions are one such site of accumulation. These regions set the stage for economic activities and spatially bounded resources (Andersson and Koster 2010; Gertler 2003). When places undergo “efforts to reorganize institutional and territorial architectures” this tends to “unleash episodes of uncertainty, fluidity and experimentation” (Pike et al. 2018: 12). Where and when local resources are exhausted

and processes of development arrested, this is said to lead to territorial decline or lock-in (Grabher 1993). Thus, places undergo processes of prosperity and decline that can trigger responses from local actors.

Figure 1. Venn diagram on commonalities between the three literatures



Places in decline can come in the form of plant closures, similar to the empirical subject in this dissertation, and poses risks and uncertainties to that region (Martin 2018). It is not surprising then that all three literatures are interested in economic disturbances like plant closures. Plant closures of multi-locational companies can lead to “large scale redundancies (that) challenge regional resilience and call into question the ability of places to shape their own future” (Beer, Weller, et al. 2019: 386). These closures profoundly affect the local labour market, other industries, and the wider community at city, regional, and national level (Jofre-Monseny, Sánchez-Vidal, and Viladecans-Marsal 2017). This is because these closures displace workers, lead to employment insecurity and precariousness, often missed in policy formulations, impacting the wider social and community dimensions of a place (Bailey and de Ruyter 2015). It can trigger policy responses and interventions from governments and sub-national governing bodies as well as initiatives from non-governmental networks of actors central to communities (Beer 2018; Pike 2005). This suggests that plant closures create spaces for agentic efforts to emerge (MacKinnon 2017) in efforts toward economic transformations but also for resilience (Hu and Hassink 2017a).

Finally, all three literatures are interested in actors and institutions. “What is the role of agency in resilience? What is the scope for politics in the interactions between various actors to interpret a disruption and then to settle on a set of responses to it? At which scale do these actors operate (local, regional, national, and supranational? In addition, how are their powers and resources conditioned by larger structures and processes?” (Evenhuis 2020: 2). These are just some of the questions that future resilience research hopes to answer (Evenhuis 2020) but these questions also apply to the agency and place leadership literature. The agency literature is also interested in issues such as “actions that are directed towards transforming existing or creating new institutions relevant for the emergence of regional growth paths...” (Grillitsch and Sotarauta 2020: 708) or in other words institutional change. The place leadership literature is interested in actors and institutions, particularly in how actors establish and reconstitute institutions to “facilitate path creation in local economic development” (Rossiter and Smith 2017: 374). Moreover, there is a need to further conceptualize institutions at the micro-level across the resilience, agency, and place leadership literatures. Following the grand tradition of eclecticism in economic geography (Asheim 2020), this dissertation contributes to this further conceptualization by borrowing concepts such as timing norms from organizational studies, and term limits from political economy.

There are, however, also points of dissonance between the literatures on resilience, agency, and place leadership. The first one concerns the practice of causal inference, and the second one, concerns measurement. The regional resilience literature tends to conceptualize and interpret factors that lead to outcomes of resilience as ‘determinants’ (Diodato and Weterings 2014; Nyström 2018). This suggests that causal inference is based on observed empirical regularities in the data despite acknowledgement of some differences in reaction to shocks (Fingleton, Garretsen, and Martin 2012). This is problematic for some agency and place leadership scholars where relationships between factors and outcomes of agentic processes are not deterministic but instead contingent. Deterministic here means that factors will always bring about outcomes and contingent here means that the interactions between actors and structures may lead to an outcome but not necessarily so. One way to overcome this point of dissonance is to treat empirical regularities observed in the data, not as invariant relationships between factors and outcome, but instead, tendencies towards outcomes (Rutten 2021). This will avoid connoting a deterministic relationship in the interpretation of factors and outcomes.

The second point of dissonance between the three literatures is closely related and it concerns measurement and more, broadly, differences in methodology. Research in

resilience focused on a systems approach tends to use quantitative methods like regression analysis that measure the effects of single factors and variables. Research in agency and place leadership tends to use qualitative methods like case studies in examining factors that enable outcomes. Conceptually, the approach of measuring the effects of single variables does not cohere very well with the claim in the agency and place leadership literature that no single condition can bring about outcomes but instead combinations of conditions. This is not to say, however, that quantitative methods are unimportant. It is in that it offers a numerical language in which to describe and analyze the social world but like with any method, it has its limitations in capturing processes that are not easily quantifiable, such as agency for example. Qualitative methods are also important in that it is useful in studying complex processes that defy quantification and require nuance but do have limitations in providing clear indicators on factors that are easy to quantify. However, as many scholars have noted, quantitative and qualitative methods are not mutually exclusive (Goertz and Mahoney 2012a). Methods can be coherently mixed if they can share the same approach to conceptualization (what can be measured) and agree on a research strategy (how can it be measured) that can substantiate conceptual claims (Goertz and Mahoney 2012a).

In sum, the commonalities and shared interests of these three literatures, namely, in the uneven landscape of economic development, in territorial architectures such as regions, and in the relationship between actors and institutions, are what allows this dissertation to bring the resilience, agency, and place leadership together. Bringing these literatures together and borrowing concepts from other fields are done in order to form and contribute a deeper and more textured understanding of why and how local actors' responses to economic crises vary across time and place. Even though there are points of dissonance between the three main literatures examined in this dissertation, namely in causal inference and measurement, these are largely implicit differences and can be overcome by aligning conceptualization and research strategies. Moreover, this dissertation has three articles that address the scholarly communities associated with each of the three literatures separately. This is also another way to overcome these methodological and philosophical conflicts.

3 Research project

The research project, on which the first two articles in this dissertation are based, examined the two closures in Lund and Södertälje. In 2010, AstraZeneca, one of the biggest pharmaceutical companies in the world, announced they would be closing their research and development (R&D) facility in Lund and moving 900 jobs to Mölndal, near Gothenburg, a significant loss of capabilities and skills from this region. Three years later, this closure would be replicated in the original home of the Swedish side of the company, Astra, in Södertälje. This time, these R&D jobs at 1200, were not moving but would be completely terminated by the company along with the research projects associated to them. These events posed significant impact in both Södertälje and Lund; considered, in varying degrees, a crisis for each respective region. Not only did both closures pose significant job losses in the region, but also the physical buildings of two large research complexes would be emptied. Thus, the specter of biotechnological human capital disappearing from both regions was imminent. Both of these closures represented a serious decline of the pharmaceutical industry presence in these two regions. Both former R&D sites were turned into science parks, Medicon Village and Södertälje Science Park, respectively. The similarities in trajectories and attempts at resilience are intriguing and triggered this academic inquiry in using these cases as empirical material for this dissertation.

Both closures were enacted by the same company using the same resources, techniques and subject to the same economic rationale for the closure. The official *raison d'être* for the closures pushed in the company statements is the loss of patent exclusivity and worldwide changes to biotech production, and a very long pipeline for development. Both closures had similar volumes of job losses, in the Lund case, 900 were moving, and in Södertälje, 1200 were being terminated. A similar policy initiative was created in terms of using the facility to establish a science park.

3.1 Background on AstraZeneca

AstraZeneca is a Swedish-British merged firm and a pharmaceutical company with global operations. It employs 61,100 employees worldwide, 7,300 of which are in R&D (AstraZeneca 2017). It has had ten successful products that made 1 billion dollars each for the company in the areas of cardiovascular, gastrointestinal, infectious, respiratory, neuroscience, oncology, and chronic obstructive pulmonary diseases. Its R&D operations have been reorganized to what the company refers to as strategic R&D centers in Cambridge, United Kingdom, Gaithersburg, USA and Gothenburg, Sweden although it also has R&D in Boston and California, USA, Shanghai, China, and Osaka, Japan (AstraZeneca 2017). It continues to have a manufacturing plant in Södertälje, employing around 4,800 workers (AstraZeneca 2021). Justifications for closing down former R&D facilities and having to undergo restructuring is that the global pharmaceutical industry is undergoing changes such as high production costs and long developmental pipeline that can take up to 15 years (AstraZeneca 2015, 2010, 2009, 2012). These market conditions are inherent features of drug development (Hedner 2012). One big change for AstraZeneca is that some products are coming off patent which means losing exclusivity of popular drugs, such as Crestor and Nexium for AstraZeneca (AstraZeneca 2012). This suggests it stands to face more competition from generic drug companies and face potential reductions in their bottom line.

AstraZeneca closed down some of its research facilities across the world, namely, Charnwood in England, Montreal in Canada, Lund in Sweden and Södertälje in Sweden. In streamlining its R&D to reduce in-house research, the decision was announced in 2010 to close the R&D facility in Lund over a two-year timeframe, affecting almost 1,200 jobs. Ninety percent of employees were offered their jobs in Mölndal, Gothenburg with 40% of those deciding to move. AstraZeneca also had a research and development facility in Mölndal and the reason why it was chosen for relocation was because it had room for expansion in terms of absorbing more workers with available housing in the area. Lund had a severe housing shortage at the time, and it was determined that it would not be able to absorb additional people if it was the site chosen for relocation. Coverage of relocation costs and other financial incentives were offered to encourage mobility (Severinsson et al. 2012). The closure of the R&D facility in Södertälje in 2012 in both locations, Snäckviken and Gärtuna, was announced but with a one-year time frame, also affecting 1,200 jobs (Trygghetsrådet 2015).

3.2 Lund and Skåne region

Lund is a university town with a population of 116,000. It was established in 1666 and hosts the largest research university in Sweden that ranks consistently in the top 100 universities worldwide (Lund University 2021). It has 41,000 students and 7,500 employees. It has a turnover of 808 million euros, two thirds of which are from research and one third from education. It is the third largest employer in Lund, behind only the municipality and the region (Lund Municipality 2021). The university is led by a Vice Chancellor, appointed for a maximum of six years, who represents the university board and is responsible for forwarding goals set by the board as well as managing its various activities (Lund University 2021). The position includes issuing regulations, monitoring activities, and pushing for university-wide initiatives.

The university in Lund has eight faculties: the faculty of engineering, faculty of science, faculty of law, faculty of the social science, faculty of medicine, faculty of humanities and theology, school of economics and management, faculty of fine and performing arts, campus Helsingborg, and school of aviation (Lund University 2021). Lund is home to large manufacturing companies like Tetra Pak, Gambro, Alfa Laval and ICT companies like Eriksson, Sony Mobile, Axis Communications, and Qliktek. It has a large university hospital network, a technical college known for its innovative capacity, Lunds Tekniska Högskola (LTH) and has an active student population. Lund municipality controls the properties, lands, schools, and amenities of the city whilst Region Skåne is the regional governance unit. The government structure in Sweden is such that regional authorities are important. Responsibilities and resources are devolved to the region and its leaders are voted in by election. Regions have governance responsibilities such as being in charge of the roads and connecting highways between the different cities and towns, such as in the Skåne region. Region Skåne is also responsible for management of hospitals and health care facilities as well as care for the elderly (Lund Municipality 2021).

Lund is situated in the Skåne region in the southern part of Sweden and within easy commuting distance from Malmö. Malmö is the largest city in this region and third largest in Sweden. It has a growing ICT and new media industry but formerly had a large shipyard industry (Martin and Martin 2017). It has a relatively large multi-cultural population and has experienced some challenges regarding immigration and relocation of asylum seekers in recent years. The Skåne region is home to the food industry as it has numerous farmlands and hosts manufacturing bases to large

companies such as Scania and Skånemejeriet. It has experienced economic crises such as the closure of Scania in Falun in 2006. The region is far from the Stockholm region and enjoys a certain level of autonomy from the capital, but this has also meant that it does not have the same level of political access as proximity might bring. The region is connected to Denmark via the Oresund Bridge, which allows for the daily commute of people between the two areas, referred as the Oresund region. Copenhagen, Denmark has leading pharmaceutical companies such as Novo Nordisk. The presence of these large companies and the good transport connections in the region suggest a context characterized with a strong but developing local economy.

3.3 Södertälje and Stockholm region

Södertälje municipality, with about 75,000 inhabitants, is situated in the south of Stockholm region. It prides itself in being home to large internationally successful companies such as Scania and Astra, which have been in the region since 1911 and 1913, respectively (Municipality 2017). Stockholm region hosts the capital of the country and is the center for governance, financial, and cultural life in Sweden. Södertälje has experienced recent social problems such as organized crime. It is also no stranger to economic crisis, having experienced restructuring and unemployment from its big companies like Scania and Volvo, which reduced its workforce in 2006. There is no formal regional governing body like in Skåne. Södertälje is geographically proximate to the country's capital Stockholm, which is already the seat of the national government. This explains why it does not have its own regional governing body. The municipality has good transport links to the center of Stockholm and is part of the commuting belt of the region. There is no big university presence in Södertälje. At the time of the closing, The Royal Institute for Technology in Stockholm (KTH), established since 1827 and regarded as a premier engineering and technical research university, had about 600 students in one of the branches there but its main facility and operations were and are still in the center of Stockholm. AstraZeneca announced plans to close their R&D plant in Södertälje in 2012 with a one-year transition period. Unlike in Lund, these jobs were not moving to Mölndal but instead terminated almost completely. A small select group of individuals was offered to continue their research in Boston. There were 1,200 jobs affected (Trygghetsrådet 2015). The manufacturing site in Södertälje continues its operations, however, employing 4,800 people (AstraZeneca 2021). The dwindling presence of KTH and the termination of R&D jobs suggests regional assets in the region are fewer than that of Lund particularly in terms of human capital and employment opportunities for research competencies.

3.4 Closure and the creation of Medicon Village and Biovation Park

In Skåne, members of Försknings o Innovationsrådet in Skåne, (FIRS), took the lead in pushing for initiatives to leverage the crisis, forming a coalition with other leading stakeholders in the region. Inspired by the innovation council of Finland, FIRS was formed to serve as a forum for key stakeholders with development initiatives in key areas of innovation such as sustainability, personal health, and smart materials. It had taken official steps to formalize its organization in 2009 lead by the vice chancellor of Lund University at the time, along with members from the management of Region Skåne, colleges and universities around the region, municipal representatives from Lund, Malmö, Kristianstad, local authorities, and industry. The members of this group were strongly connected with top management of the university, municipality of Lund, Region Skåne. They worked closely with the philanthropic foundation of Mats Paulsson, founder and owner of PEAB, to purchase the AstraZeneca R&D facility.

The intention was to turn the facility into an innovation hub to display a proposed innovation model referred to as Triple Helix that involves collaborations between industry, university, and government, as one of the core mandates of FIRS. The plan to transform the facility was eventually successfully orchestrated through the collaboration between Lund University, Region Skåne, PEAB, Lunds Kommun, Malmö City, and the Mats Paulsson Foundation, who agreed to purchase the facility. This is now known as Medicon Village and was launched in 2010. There were serious challenges involved in establishing Medicon Village. Finding financing for the building required FIRS to use their alliance and their connections as guarantors to make the financing possible with local banks. Members of FIRS leaned on their respective organizations to contribute funding such as Lund University and Region Skåne. Some deans opposed the vice chancellor of Lund University in this proposal and his intention to fund and support Medicon Village. There were concerns it would privilege certain interests and crowd out others. However, the university board (the chairperson of the board was a member of FIRS and a close ally of the vice chancellor) championed the endeavor and managed to overcome this opposition at the time. The vice chancellor needs the approval of the board of directors for major funding allocations. As such, the chairperson of this board of directors is not a subordinate position to the vice chancellor and is, in fact, a powerful position in its own right.

Medicon Village has styled itself as a platform that facilitates cooperation between and amongst members of industry, universities, government bodies and society. It aims to bring these actors together to provide innovative solutions to some of the community problems in areas of health, life science, and welfare concerns (Medicon Village AB 2021). Their goal is to produce innovation and new ways of thinking and doing things. Beyond office space, Medicon Village envisions its role as a meeting place for organizations looking to create and add value to society (Medicon Village AB 2021). The extent to which it has succeeded with these aims and intention is debatable. It has faced significant challenges to operationalizing the concept in the daily routines of the companies situated in the village. It hosts over 140 small and medium sized biotechnology companies and members of the academe from Lund University, think tanks, the regional healthcare provider Region Skåne, and other companies connected to the biotechnology and life sciences (Medicon Village AB 2021). Former employees of AstraZeneca have located their spinoffs there.

In Södertälje, efforts to respond to the closure were led by the municipal government of Södertälje, headed by a new-term mayor who had just been elected a few months prior to the closure. The novelty of local political leadership was problematic because they did not have a network of people to help find solutions to the crisis. When the news of the closure broke, the local political leadership called for a workshop, inviting people from the community, many of whom the new administration did not know personally but assessed to be potentially interested in helping respond to the imminent closure of the R&D plant. They mobilized different stakeholders to try to figure out what to do and how to deal with the closure. This is in contrast to Lund where the local government did not lead the effort in dealing with the aftermath of the crisis but used the crisis to leverage their interests in establishing its operations. Of note is the fact that AstraZeneca, originally established in Södertälje, had been in the region well over 100 years and stakeholders feel a special attachment to the company relative to Lund. Whilst the national government appointed a mediator to be a contact person between the national government and the municipality, the national government mostly seemed reluctant to get involved in the early days of the announcement of the closure. The focus for the municipality was on dealing with the massive facilities in Snäckviken and Gärtuna that AstraZeneca would be leaving behind. The local government appointed politically connected representatives to look for potential buyers for the facilities.

In Södertälje, Scania offered to purchase a part of the facility to convert for its own expansion uses. A deal by the municipality, between Acturum and FAM, to buy the

available facility, was eventually brokered. The local government, for its part, decided to move some of its operations there to guarantee some residents for the office space. In addition, it contracted the Uppsala Innovation Center (UIC) to examine the potential projects that should be continued by the researchers of the R&D of AstraZeneca and allowed these to be incubated as spinoffs in Biovation Park, investing 3 million per year on this contract with UIC for a period. Having successfully negotiated a sale of the facility, an important step in moving forward was lobbying a reluctant national government to pitch in. To overcome this reluctance, Scania, AstraZeneca and Södertälje Kommun lobbied together to convince the national government that their support benefits three critical sectors in the region, namely: transportation, biotechnology, and the public sector. One successful avenue was in lobbying the Minister of Education for help in replenishing the loss of technical competency in the region with the plant closure. This is the department of the government in charge of higher education policies, including the number of students assigned to campuses. The ministry eventually acquiesced and decided to double the student population at KTH in Södertälje to 1,200 whereas before it was slowly phasing it out from the municipality. Since Södertälje did not have a strong university presence in the immediate region, this was an important contribution. These students and KTH are located at Biovation Park.

Biovation Park was established on the site of the former AstraZeneca facility bought by Acturum, a joint venture between PEAB, a leading construction company in Sweden and owned by the benefactor that helped purchase the facility in Lund, and FAM, the Wallenberg foundation's asset management arm. The concept of the park is to provide company space for small, medium, and large companies, not only targeting companies from the life science industry but also from the other industries present in the region. Södertälje municipal government has since expanded its involvement and scaled up to create the Södertälje Science Park. The scaled-up science park will be a joint project of the local government, Scania, AstraZeneca, Acturum and KTH. The aim is to create and increase cooperation between academia, industry, and governments together in order to foster innovation. It will have an incubator component, which is the Biovation Park, a larger presence of KTH with new buildings in place that opened in 2018, Campus Tegle, and residential buildings and other facilities. The focus of SSP is consolidating selected industry strengths of the region: sustainable manufacturing, life science and food technology. The region has a history of manufacturing, life science, and in the area of Järna, growing sustainable food.

Two main differences between Lund and Södertälje is that when the closure was announced, the municipal government leaned on Scania, an automotive manufacturing company to help them, in the absence of a formalized regional government like Region Skåne. Scania, like AstraZeneca, is considered a heritage company in the region, since it was also founded in Södertälje. Whereas in Lund, FIRS and the university and existing initiatives percolating in the region, emerged and used the closure as an opportunity to take over the facility and leaned on other actors and strong players in the region like the regional governance body, Region Skåne, and the private sector to launch its own operations. The national government contributed to SSP in terms of reinvesting and expanding the operations of KTH as one of the pillars of the crisis response of Södertälje, but no such support was given to Lund. Large amounts of resources were already earmarked by the national government for the big science complex of ESS that was being built in Lund around the time.

4 Research design

The research design of a doctoral dissertation requires a reflection on the nature of academic inquiry, the qualities of evidence that can be found because of this inquiry, and the methods in which this evidence can be gleaned. Thus, this chapter discusses the ontology and epistemology of this research project, delves into the fundamental features of critical realism and how this is reflected in this dissertation in both concepts and methods. It also goes into the methodologies of this dissertation, including a detailed discussion of the comparative case studies and qualitative comparative analysis conducted, how data was collected and analyzed, the link between the methods and critical realism, and the advantages and limitations encountered with the use of both research strategies. Finally, this chapter ends with a discussion on the empirical material across the three articles.

4.1 Ontology and epistemology

This dissertation sets out to examine two parallel closures in order to investigate how different sets of local actors responded to these economic disturbances, what their actions involved, what their intentions are, and how they navigated the policy process. Getting at the heart of how actors behave and react to an event given a set of conditions illuminates why and how local actors' responses to economic crises vary across time and place. This examination requires concepts that permits understanding why and how actors act in the way they do and methods that enable analysis and interpretation of data collected on the behavior of actors. Selection of such concepts and methods is guided by an underlying philosophy of science that describes what the world is (ontology) and what we observe and think it is (epistemology).

There are different philosophies of science that serve as research paradigms when conducting social scientific inquiry. The differences between these philosophies center on fundamental disagreements on ontology, referring to the nature of being, and epistemology, referring to the theory of knowledge. There is positivism that posits that

knowledge can be derived from natural phenomena and their properties and relation requiring a sensory experience that must be interpreted via logic and reason, as well as scientific verification or mathematical proof (Chalmers 2013). This philosophy has been heavily criticized by interpretivist philosophies like social constructionism, hermeneutics and phenomenology that argue that the social world cannot be studied as if it were the natural world (Craib and Benton 2010).

This is because according to social constructionism, knowledge is socially constructed and situated, where language plays an important role in this construction (Berger and Luckmann 1966). Whilst hermeneutics focuses on the interpretation of this language, phenomenology posits that knowledge should be based on consciousness and experiencing firsthand a social phenomenon (Craib and Benton 2010). Interpretivist philosophies have two main features: firstly, a relativist ontology which holds that reality as intersubjective, that is, it is based on meanings and understandings of the social and experiential levels (Craib and Benton 2010). And the second is a subjectivist epistemology, which posits that knowledge is inseparable from people, therefore the researcher and the research subject are inextricably linked (Archer 2002). Its research goal is fostering understanding rather than predicting outcomes (Craib and Benton 2010).

4.1.1 Critical realism and its distinctions

While this author agrees with the interpretivist critique that the social world cannot be studied like the natural world as if it were governed by natural laws (Sayer 1999), this author does not believe that everything is socially constructed and that there is a real world that exists independent of knowledge or experience of it. This is why this author subscribes to critical realism, a middle ground philosophy, if you will, between positivism and interpretivism. Critical realists believe that the social world is made up of open systems and that they are emergent because the people who live in it are reflexive, and this permeates in human actions (Archer 2010). Critical realism is a meta-theory that has four fundamental and distinct features (Archer 2020: 137) and a discussion of each feature follows.

A rejection of Humean empiricist account of social reality and causality.

The Humean empiricist view of the social world is essentially a closed system where social phenomena could be shown to be predictable that might be described by social laws and causality is viewed as regular sequences of events (Bhaskar 2013). Positivists

hold that only when universal correlation is achieved, can something be treated as causal (Danermark, Ekstrom, and Jakobsen 2005). Critical realism, on the other hand, believes that observing regularities is not necessary in explaining causality because, fundamentally, structures have causal powers and when combined with agency, lead to emergent outcomes, distinct from the individual objects of interest (Archer 2003). Whether these causal elements will be activated depends on the interplay of other conditions and the behavior of the human actor (Archer 2002). This is why critical realists believe that the social world is open and social phenomena are highly contingent and contextual. “What causes something to happen has nothing to do with the number of times we have observed it happening. Explanation depends instead on identifying causal mechanisms and how they work and discovering if they have been activated and under what conditions” (Sayer 1999: 14).

The rejection of the Humean empiricist account of social reality and causality is reflected in this dissertation in two main ways. Firstly, the social world is neither conceived of, nor discussed as a closed system and as such, the interaction between actors, such as for example, the university chancellor and the municipal mayor and structures like term limits, are interpreted as contingent rather than deterministic. This means that this dissertation does not claim that a university chancellor or a municipal mayor will always act in the same way facing the same term limits. Outcomes of agency depends on the specificities of context and similar interactions may not lead to outcomes of agency every time. Moreover, causality is discussed analytically as opposed to empirically. This means here that discussions of generative processes or mechanisms that cause agency to manifest in places are based on the iterative process of analyzing evidence and theory. This is as opposed to an empirical view of causality that is based on finding empirical regularities in the data. While it is possible to find similar outcomes from the same set of conditions, at best, these show tendencies rather than regularity because the social world is an open system (Sayer 1999).

An ontology of social order that is stratified, where emergence is possible as well as upwards and downwards causation.

Critical realism insists on a stratified and differentiated social order conditioned by and emergent from nature, in critique of other flat ontologies of other modern philosophies that tend to reduce ontology to epistemology (Bhaskar 2020). A stratified ontology means that there are three distinct overlapping domains: the real, the actual, and the empirical (Bhaskar 2013). The real is the domain where processes and mechanisms exists regardless of whether or not they generate an event (Bhaskar and Danermark

2006). When processes and mechanisms do materialize as an event because of certain conditions, this belongs to the domain of the actual (Gerrits and Pagliarin 2020). When these events are experienced as reality actualized, it joins the domain of the empirical (Gerrits and Pagliarin 2020).

Emergence is when social relations and conditions lead to outcomes in the social system that cannot be reduced to its constituent parts (Archer 2000). It is also important to note that the constituent parts need not always be activated to lead to emergent outcomes (Rutten 2021). These emergent outcomes can lead to second and third order effects. Archer's (2000) example of this is the division of labour that gave rise to the power of mass production. In turn, mass production led to the accumulation of wealth of the British government. This caused the British to expand and attempt to colonize new areas around the world as a second order effect of the division of labour. A third effect is that English-speaking scholars can have advantages in academic institutions in the Western world. These second and third order effects are distinct outcomes, but they are not reducible nor could they be directly predicted to and from its original constituents (Archer 2000). This is what emergence means. Upward and downward causation means that there are structures bearing down on agents and agents are attempting to push for change from below (Archer 2020). However, causal mechanisms can manifest from both directions where structures can change the emergent outcomes for actors, and actors can change the emergent outcomes for structures.

In this dissertation, this stratified ontology and view on emergence is reflected in its treatment of actors and institutions. Institutions constrain actors and actors engage in institutional change. The university vice chancellor in the case of Lund, for example, was limited by a procedural rule of a six-year term. This incentivized strategies layering in attempting institutional change by embedding his agenda within the organization. Moreover, in parallel to Archer's example, in this dissertation, the closure of Astra Zeneca gave rise to networks of actors engaging in policy actions that involved the building of science parks in two different regions. In turn, these science parks helped their respective regions to develop local capacities and recover from the closures. The second order effect of the closures is that it gave rise to new entrepreneurial activity that was enabled by the incubators that helped startups in the science parks. A third order effect would be that these networks of actors involved in the creation of these science parks are able to pursue other employment opportunities to work at other organizations in top positions. The second and third order effects of the closure of Astra Zeneca are distinct outcomes but they are not direct or planned results.

Structure should not be automatically prioritized over agency when explaining causation.

Critical realism endorses referring to both agency and structure in trying understand and explain social phenomena which requires a commitment to understand both agents and their characteristics and behavior, and structure such as time, interactions, and norms in the process (Price and Martin 2018). This is essentially because “humanity and society have their properties and powers, which makes their interplay the central issue of social theory of all time” (Archer 2002: 17). This insistence that structure should not be automatically prioritized over agency when explaining causation is a pointed reference to Archer’s famous critique (1982) of Giddens’ structuration theory (1979). In brief, Giddens’ structuration theory holds that social systems are created and reproduced by actors, patterned after structures that affirm social systems when they instantiate them in their actions (Giddens 1979). “Structuration referred to the active process by which individuals, informed by structure, acted in the world to reproduce the social structures which confronted them” (King 2010: 253).

Archer (1982) found fundamental problems with structuration theory in that it conflated the social system with the agents themselves, which is problematic since both agents and structures have distinctive causal powers (Archer 1982). It also suffered from not answering important ‘when’ questions such as “when can actors be transformative (which involves specification of degrees of freedom that actors have that is beyond the influence of the very structures that is supposed to be influencing them!) and when are they trapped into replication (which involves specification of the stringency of constraints that structures are supposed to have)” (Archer 1982). Archer (1982) also advocates for an analysis of instances when actors have the potential to instantiate change and identification of the conditions in which actors are confronted by the choice to instantiate change, so that both structure and agency are not overly prioritized in causal explanations.

In this dissertation, the insistence on not prioritizing structure over agency is reflected in the identification and treatment of objects in this study. Objects in this study are actors such as a university chancellor of a university, a mayor of a municipality government, as well as structures that are institutions like term limits and timing norms, and place-based conditions. The events of the closure were analyzed in terms of the opportunities and risks it posed to local actors in instantiating change as well as the conditions in which these decisions and strategies were formulated by actors involved. In the abstract, actors in this dissertation are treated as separate and distinct from

structures. This distinction is not trivial and is central to one of the theoretical contributions of this dissertation. By treating actors and institutions as separate, the reflexivity of actors can be included in the analysis of changes undertaken in the agentic process, particularly on how actors view time, form their future expectations based on it, and how they act to mitigate inter-temporal changes to their access to resources.

Explanations must rely on “ontological realism, epistemic realism, judgmental rationality” (Archer 2020: 137).

Critical realism has an ontological realism which holds that “the world is structured, differentiated, stratified, and changing” (Danermark, Ekstrom, and Jakobsen 2005: 5), as pointed out previously. Bhaskar (2013) cautions against reducing these three domains (the real, the actual, and the empirical) only into the empirical or what can be experienced because it is unlikely that “the world just happened to correspond to the range of our senses and to be identical to what we experience” (Sayer 1999: 11). This reduction is what is referred to as the epistemic fallacy. Epistemic fallacy refers to the conflation of ontology with epistemology. Epistemic realism therefore is a rejection of the epistemic fallacy and instead acknowledges that there is a world independent of our knowledge of it (Sayer 1999) where events can transpire without observation (Archer 2013). According to Archer, the greatest contribution of Bhaskar’s work is “rescuing ontology (how the world is) from epistemology (how we take it to be)” (Archer 2020: 140). Judgmental rationality, on the other hand, is the ability of evaluating and consequently selecting different ideas and positions as better or worse (Price and Martin 2018). Judgmental rationality allows “researchers to evaluate and compare the explanatory power of different theoretical explanations and finally, to select theories which most accurately represent the ‘domain of the real’ given our existing knowledge” (Hu 2018: 130). Judgmental rationality also suggests taking the researchers values into consideration, such as professional integrity and honesty in producing ethical and non-reductive positions (Price and Martin 2018). Critical realism endorses all three dimensions in formulating explanations about the social world.

This dissertation subscribes to ontological realism, epistemic realism, and judgmental rationality. Ontological and epistemic realism is demonstrated, for example, in the choice of the QCA method as part of this dissertation’s research design (to be discussed further on in this chapter). QCA, as a method, is informed by critical realism (Gerrits and Pagliarin 2020; Gerrits and Verweij 2013; Rutten 2021). A demonstrable example of this critical realist position in QCA is that the truth table, one of the results this method generates, includes possible results that are not observed in the data collected;

referred to as logical remainders in QCA language (Rutten 2021). These logical remainders are a firm acknowledgement that there is a world that exists independent of this research project where other outcomes are possible because reality is stratified. This also avoids the epistemic fallacy of conflating what is and what we experience or observe. Judgmental rationality has been made in this dissertation by examining how the three literatures, namely resilience, agency, and place leadership, explain local economic transformations and identifying areas that need further conceptualization and empirical evidence in order to explain agentic process of local economic transformations.

4.1.2 Why critical realism?

In conclusion to this subsection, the question on “why critical realism?” is raised (Sayer 1999: 18). This author agrees with Sayer that Bhaskar’s (1983) argument in defense of critical realism in that it holds emancipatory potential is persuasive and compelling. Bhaskar says that the social sciences are meant to be “critical and self-critical” and that “the possibility of a scientific critique of lay ideas, grounded in explanatory practices based on respect for authenticity and epistemic significance of those ideas, affords to the human sciences an essential emancipatory impulse, in virtue of which, we pass securely from statements of fact to value” (Bhaskar 1983: 16). This suggests that a social scientist should not simply reproduce knowledge but actively take part in its discovery, reflections, and nuancing through critique and exposition.

Another persuasive element to critical realism that makes it so resonant is the fundamental humility it attempts to imbibe: that researchers are mere construers of a reality and that they are not the center of it (Sayer 1999). That as individuals, at best all that can be known is a partial understanding of the empirical but that there is a world out there independent of a researcher’s knowledge of it. This humility or ‘underlabouring’ as Bhaskar (1982) calls it, in treating research and knowledge as bigger than the self, is beautiful because knowledge is then something to behold and appreciate rather than something to colonize. Critical realism, as a meta-theory with its critique and counter arguments against other modern philosophies, is already intellectually persuasive but the dimensions of it that lay claim to an emancipatory potential is inspiring.

4.2 Methodologies

This subsection discusses the comparative case study and quantitative comparative analysis employed in this dissertation as well as data collection for both methods. A discussion on how each method used is informed by critical realism is made in more depth than in the previous subsection. The advantages and limitations of applying both methods are described, as well as how empirical materials are used in the articles.

4.2.1 Research strategy: comparative case studies

A case study is a comprehensive examination of a real-world phenomena and its context using qualitative methods (Gerring 2008; Yin 1981). Case studies are typically used when outcomes are too complex for attributing to a single factor, when there are a large number of participants, and when the event in question exhibits agency (Yin 1981). It is a research design “more suited to how and why questions, which can be explanatory in nature” (Easton 2010: 119). Case study research designs require carefully selecting cases, usually from substantive and practical considerations (Yin 2009). Selecting cases must have relevant data available in order for it to be carried out but more importantly, selecting a case requires considerations of significance (Seawright and Gerring 2008). What makes a case special or significant as opposed to mundane is if it covers a distinct event that typically triggers change or serious consequences (Yin 2009). The two plant closures discussed in this dissertation are significant because they affected the livelihood of over two thousand people in Sweden and triggered changes to the local economies of Lund and Södertälje, respectively.

Comparing two or more cases helps strengthen a case study (Yin 2009) because it allows for a method that deeply analyzes qualitative data. A comparative case study requires either similar cases but different outcomes or different cases but similar outcomes. It also demands parallel information in order to make cases comparable. Designing a comparative case study is said to be appropriate when the same phenomena exist in several situations (King, Keohane, and Verba 1994; Yin 1981). The parallel plant closures in Lund and Södertälje represented an opportunity to conduct a comparative case study examining agency under a similar event of a local economic crises but within different regional conditions, with different actors involved and with ostensibly similar but different emergent regional outcomes. The similarities between the cases of Lund and Södertälje became natural controls that minimized the number of explanatory factors. Comparative case studies are also useful for building theories because symmetries and asymmetries can be shown in verifying propositions and confirming

results (Eisenhardt 1989; Stinchcombe 1987). Comparative logic can emphasize complements and extensions to the theory particularly when cases enjoy parallels such as the cases in this dissertation. Conducting a comparative case study permits getting close to the empirical reality (Creswell 1998).

Saxenian (1996) exemplifies the usefulness of the comparative case method in her work on comparing two leading technology regions, Silicon Valley in California and Route 128 in Massachusetts. In her seminal work, she uses the comparison of these two regions to show that outcomes are divergent despite similarities in pre-conditions. This comparison showed the limits of agglomeration, and the difference dense networks make for regional outcomes. The difference between the two regions is how inter-firm networks developed and grew from tech company spinoffs in Silicon Valley with its open labour market policy as opposed to Route 128 that stifled employee crossover by valorizing company loyalty and hierarchies (Saxenian 1996). The comparative case study follows the dense interpersonal networks within companies in Silicon Valley and Route 128 and details the processes transforming the technological trajectories in both regions.

Through a comparison of the two regions and in-depth interviews, her work uncovered the dynamics for innovation that is underpinned by collaboration, information exchange, worker mobility, networking, joint problem-solving between suppliers and specialists (Saxenian 1996). These features appeared at the micro-level, driven by interpersonal relationships of former colleagues and vendors that form networks of learning and information exchanges and so were gleaned precisely from interviewing key actors in each specific case. The research questions in this doctoral dissertation are not unlike the research agenda of Saxenian (1996). This dissertation also seeks to examine the role of actors in transforming regional trajectories driven, for example, by network relationships and connected agendas. Although the regions under study in this dissertation are different, the same global pharmaceutical company triggered the crises in both the Lund and Södertälje regions, providing parallels that allow a meaningful comparison. This is why doing the comparative case study is the appropriate research design for this dissertation.

4.2.1.1 *Semi-structured interviews*

Semi-structured interviews were conducted with key stakeholders. Interviewees were primarily selected from names identified from the desk research as key stakeholders and central actors as portrayed in news articles and official reports involved in the closure of Astra Zeneca but also in the creation of both science parks in both Lund and Södertälje. Using the snowballing technique or chain referral sampling as it is also called, primary actors were identified and interviewed, and subsequently asked to recommend other actors who should be interviewed (Biernacki and Waldorf 1981). This allowed the identification of (and access to) more stakeholders to interview and access to these interviewees, some of whom were previously identified but did not immediately respond to requests to be interviewed. Snowballing made possible these further interviews with the endorsement of the primary interviewees particularly, in some instances, where the person was more reluctant to be interviewed.

The snowballing technique can, however, encounter issues such as “finding respondents and starting referral chains, verifying eligibility of potential respondents, controlling types..., pacing and monitoring referral chains and data quality” (Biernacki and Waldorf 1981: 144). In order to make sure that relevant respondents were identified, central actors such as the vice chancellor of the university in Lund and the mayor of the municipality in Södertälje, were the first to be interviewed and were requested to provide suggestions of names of people to be further interviewed. In order to check the eligibility of these persons, their names were crosschecked with third party accounts, such as newspapers and online sources. Each person interviewed was also asked what their role was or has been throughout the closure and the eventual creation of the science parks in their respective regions. Selecting the types of respondents were based on having parity between the two cases in terms of types of actors in the sample.

| Actors | Lund | Södertälje |
|---------------|-------------|-------------------|
| University | 4 | 3 |
| Industry | 4 | 3 |
| Government | 1 | 3 |
| Total | 9 | 9 |

All the interviews were semi-structured in form. Interview guidelines were created prior to every interview (Leech 2002). These guides covered three main areas: background of

the interviewee regarding themselves, their roles, and the organizations they represent; involvement with the closure; and in subsequent policy initiatives. Since the interviews were semi-structured in form, questions were adjusted to the dynamics of interviews, particularly on the topics that were being covered by the interviewees. The interview themes included opportunities for the interviewee to narrate their role in the process of the policy initiative and animated the notion of agency in terms of gathering empirical material on the actions taken. Questions like ‘do you think this policy initiative is sustainable in the future?’ were asked to gather information on the specific problems facing the development of the policy. As the findings showed, answers to this question were rather important in revealing how shifts in resource allocation became motivations for attempts at institutional change. These changes, in turn, are due to employee turnover and the terms expiring for key proponents.

Another question that was common to most of the interviews was ‘what would you do differently in the policy initiative knowing what you know now?’ This question was used to gently prod interviewees to talk about some problems throughout the process of trying to deal with both closures. Policy challenges were sometimes underplayed in their retrospective positive accounts of the policy initiative or was reluctantly pointed out, given current roles of interviewees in managing perceptions for their organizations. In asking interviewees to reimagine the process of the closure and the subsequent building of the science parks and their roles in these processes, actors were able to explain obstacles but in less critical and more constructive approach. These discussions led to insights regarding the importance of institutional change and the importance of time. Targeted questions regarding timing norms were queries like ‘what expectations did you have regarding the benefits that the policy would show during and after your term. These questions led to findings about specific attempts of actors to embed policy initiatives to the formal agendas of organizations.

One challenge when analyzing and presenting qualitative data from interviews is to avoid losing one’s own voice when telling the stories of interviewees. Transcribing interviews repeatedly drills the spoken words of the interviewees. This is good on the one hand because familiarity with the empirical material is increased. On the other hand, it is easy to start parroting the words of the actors interviewed. Going back to the analytical framework helped minimize this vulnerability. In addition, presenting the empirical material to colleagues at varying stages of the research helps check this tendency as well as supervision. When different individuals are interviewed, actors construct depictions of past and current events through the lenses of their experiences

but also the agendas of the organizations they represent. Keeping this in mind helped provide context to the perspectives they give in terms of how the empirical material was analyzed. One potential risk to researching agency, specifically, is the problem of 'hero worship', which leads the researcher to lionize actors in their roles in the transformative process and consequently, overvalue and exaggerate their contributions. This risk was minimized with a conceptual framework that looks at both agency and structure. Moreover, the place leadership literature cautions strongly against these hero worship accounts and recommends looking at groups of actors rather than a single individual as hero. This dissertation followed this approach.

4.2.1.2 Document analysis

Different types of documents were collected for gathering supplementary materials for this dissertation. Archival documents such as pamphlets, annual reports from AstraZeneca, policy documents published by actors involved like FIRS, as well as news and media coverage. Desk research included company annual reports from AstraZeneca (AstraZeneca 2009, 2010, 2012, 2015, 2017), reports from different bodies such as universities (Severinsson et al. 2012), municipality (Lund Municipality 2021; Municipality 2017), unions and employment agency (Trygghetsrådet 2015), website material, power point presentations, promotional documents, and company pamphlets. The criteria for including these documents and material were if they were related to the closure and purchase of AstraZeneca, and if they provided information on any of the actors and organizations involved in the closure and creation of science parks. Pamphlets contained information on organizations and descriptions of their work and vision. Annual reports are published on a yearly basis regarding the financial information of the company, number of employees, official reasons for restructuring, and activities and outlook for the future. Policy documents tend to contain information regarding plans for policy initiatives. This material generated insights into the agenda of organizations.

News and media coverage include opinion pieces, debate articles regarding the closure, reports on the closure and sale of the AstraZeneca facility. The purpose of these materials is to support and complement the accounts of the events from the interviews. In total, desk research yielded 2,507 pages of documents to analyze. These documents were systematically coded in NVIVO to process the material. The coding process involved sorting the documents relating to each case, actor, and organization. A further iterative sorting was also done along conceptual themes such as agency, adaptation,

adaptability, institutions, institutional change, timing norms, and term limits. This empirical material was analyzed using several levels of abstraction (Jenner et al. 2004). Getting close to the material inspired the specific research questions for the three articles compiled for this doctoral research project and consequently demanded the use of specific parts of the empirical material.

Figure 2. Abstractions for Article I and II

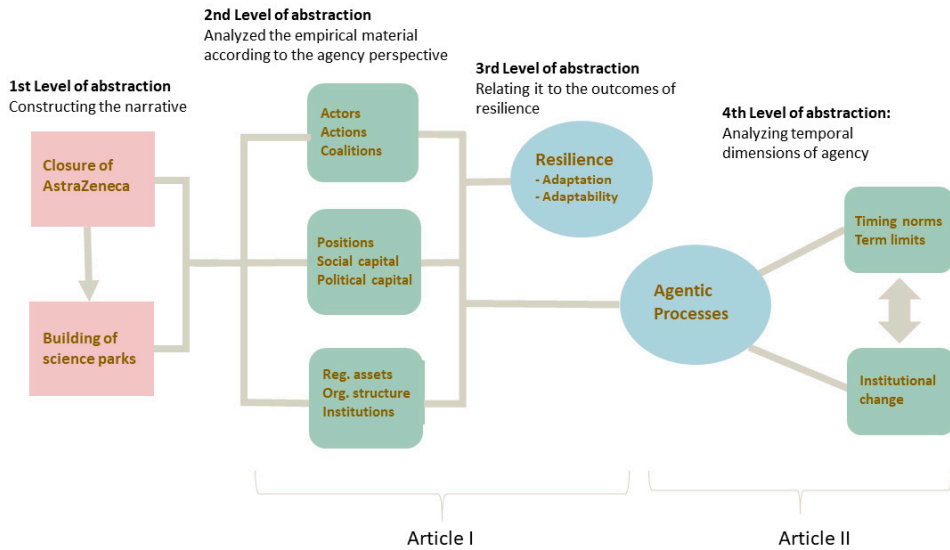


Table 3. Empirical material for comparative case study

| Archival data | | | | | |
|--|--|---|--|--|---|
| | Interviews | Pamphlets | Annual Reports | Policy documents | News and media coverage |
| No. of items | 18 | 3 | 14 | 4 | 19 |
| Pages | 95 | 76 | 2308 | 97 | 36 |
| Time | 2016-2018 | 2016-2018 | 2008-2017 | 2012-2015 | 2010-2018 |
| Description of the data | Key stakeholders: vice chancellors, mayors, CEOs, closure managers, political administrators, industry representatives, communication directors, and labour union representatives. | Pamphlets contained information on vision and mission of organizations, descriptions on the work they do and their role in society. | Annual reports by AstraZeneca are published yearly by the company and includes both financial information but also updates on the activities of the company. | Information regarding recommendations and plans for organizations involved in the closures and the policy initiatives, in varying degrees. | This included press releases, reactions from members of the public, pundits weighing in on the issue, updates on developments regarding the closure, and opinion pieces by organizational surrogates. |
| Type of information provided | Overview of events, detailed descriptions of sentiments of groups of actors, insights into factors that influenced outcomes. Information was used in Article I and II and the kappa. | Background information on the actors and their operations. Included in the background information in the kappa. | Reported on the financial information of AstraZeneca, justification for the closure of R&D, prospects for the future, and information regarding their operations aftermath of the closure. | Information regarding the intentions of organizations. Provided information on types of institutional work attempted. | Opinion pieces argued for the need for policy intervention. It also provided information on the perceptions of actors. |
| Use and limitations of the data | Post-hoc rationalization but was included in all the stages of abstraction related to Article I and II and the kappa. | One sided view of actor; used in the initial process of analysis in constructing the background of the case. | One sided view of actor; used in the initial process of analysis in constructing the background of the case. | One sided view of actors; used in looking at the outcomes of the closure, policy initiatives that were then connected to agency. | Seemingly factual information but also based on press releases. Used in constructing the general background on the case but also abstracting regarding institutional change. |

4.2.1.3 Comparative case studies and critical realism

Comparative case study research is compatible with critical realism, but this depends on what is being studied and what one is interested in learning from it (Sayer 1999). It has to focus on individual agents, and it has to be interested in investigating processes of change (Easton 2010). This dissertation adheres to this with its comparative case study on Lund and Södertälje, which are focused on local actors, and its interest lies in the process of economic transformations in places. Moreover, because case study research is an intensive form of research “using interviews and qualitative analysis”, such as the ones done for this research project, as opposed to extensive forms of research that uses “large scale surveys, questionnaires, looks for regularities, it is consistent with a critical realist ontology” (Easton 2010: 123).

A critical realist informed comparative case study opts for identifying phenomenon that is complex involving entities with clear boundaries, such as an organization or several organizations. The research question must be in the form of “what caused the events associated with the phenomenon to occur” and it “is possible to understand social phenomenon by recording and analyzing the associated events that take place as a result of the actors acting” (Easton 2010: 123). This dissertation conducted semi-structured interviews to record the accounts of actors of their memories of the closures as well as gathering desk research material that serve as records of the event and associated events. These materials were used to analyze the processes that caused the manifestation of agentic processes to occur.

The choice of the objects of study are actors, which in this dissertation are persons such as a vice chancellor and a mayor, and the organizations to which they belong, the university and the municipal government. The structures that limit their actions are institutions such as term limits of their positions within their respective organizations. Agency and structure here are considered separate and distinct components to the phenomenon, which is an important critical realist distinction. Retrodution is used in interpreting the results of a critical realist comparative case study (Easton 2010). Retrodution is an epistemological process in which the goal is to be able to identify generative processes (sometimes referred to as ‘causal mechanisms’) that explains the causes of why an event transpired (Bhaskar 1983). Critical realist “explanations invoke causal language” which can be in varying degrees of explicitness with the use of verbs like ‘cause’, ‘lead’, ‘enable’ (Sayer 1999). Critical realist informed comparative case

studies identify and discuss generative processes and “offer data collected as evidence” (Easton 2010: 124).

4.2.1.4 Advantages and limitations

An advantage of case studies, comparative or otherwise, is that it “allows the researcher the opportunity to disentangle a complex set of factors and relationships albeit in one or a small number of instances” (Easton 2010: 119). This disentangling is done through an iterative process that permits the researcher to move back and forth the material throughout the research project (Verschuren 2003). This flexibility is one of the advantages of this research method. On the other hand, a potential risk of this flexibility is definitional drift, referring to the problem of data being coded differently at the beginning of data processing from the material coded at a later stage. This limitation was addressed by coding the empirical material iteratively while checking for definitional drifts across the empirical data.

Another potential risk is misinterpretation of data. This was addressed with a partial external verification of the interpretation of excerpts from the transcripts was made. This was done in order to give an indication as to whether the interpretation of the material is valid. A workshop in 2018 “Getting more out of your interviews: documentary methods” brought together a mix of two doctoral students and two post-doc researchers as well as two associate professors, unconnected to this dissertation’s research project. Participants were from five different countries and were mainly from the department of sociology but varied in research focus spanning law, taxation, immigration, loneliness, and political movements. They were given an excerpt from one transcript since time did not allow a full examination of the empirical material. The workshop participants were asked to read parts of the transcripts from the 2016 interview with the vice chancellor of university. In addition, without informing them of the nature of this research, the way they interpreted the text of the transcripts broadly aligns with the themes identified in this paper.

4.2.2 Research strategy: qualitative comparative analysis (QCA)

Qualitative comparative analysis (QCA) was introduced in 1987 by Charles Ragin as a mixed method using the logic of cross-case analysis using Boolean algebra (Rihoux and Ragin 2009). QCA has several features: 1) it is focused on configurations and 2) on explanations as opposed to variable effects, 3) it uses complex causality, and 4) case

analysis is formalized (Verweij and Trelle 2019). Firstly, QCA can be used to identify patterns across different cases which is referred to as the case-oriented approach, or combinations of conditions to explain an outcome which is referred to as the conditions approach; both ways are referred to as ‘configurational’ in the QCA literature (Rihoux et al. 2013). Configurations show multiple pathways leading to an outcome of interest. Secondly, QCA aims at explanations using analytical causal interpretation and sets it apart from quantitative methods more focused on finding the effects of single variables typically using regression analysis (Thomann and Maggetti 2017). Instead, QCA is concerned with the ‘effects of causes’ which is the usual domain of methods in qualitative research (Goertz and Mahoney 2012b; Verweij and Trelle 2019).

Thirdly, QCA allows the compression of “large amounts of qualitative data to facilitate comparison across cases so as to render patterns of complex causality apparent” (Gerrits and Verweij 2013: 176). Complex causality has three types: conjunctural causation, equifinality, and asymmetry (Duşa 2018). Conjunctural causation refers to the a priori expectation in QCA that outcomes are the result of combination of conditions rather than net effects of variables (Schneider and Wagemann 2010). Equifinality refers to the presence of several non-exclusive combinations of conditions that produce the same outcome (Schneider and Wagemann 2010). Asymmetry means that the presence of conditions or combinations of conditions that explain an outcome does not mean that the negation of that condition or configuration leads to the negation of the outcome (Schneider and Wagemann 2012). Fourthly, cross-case analysis in QCA is formalized using a set of techniques which involves assigning and calibrating scores of the case material, performing an analysis of necessity and sufficiency, producing truth tables, and generating solutions paths. These techniques will be discussed in more detail in the subsection on QCA and its ‘analytical moment’ (Schneider and Wagemann 2012).

QCA remains to be a novel method to the field of economic geography (Rutten 2018). It has not been used very much by researchers in the field with few exceptions (Li and Bathelt 2021; Rutten 2018). Rutten (2018) uses QCA to examine openness values, such as tolerance, and how they matter to regional innovation systems across 108 North Western European regions. The conditions examined are “analytical knowledge creation, synthetic knowledge creation, economic diversity, melting pot, and self-expression on the outcome of regional innovation” (Rutten 2018: 1220). An example of a finding from this QCA paper is “crossovers of knowledge, practices, and ideas between economic actors, groups in society produce regional innovation when these crossovers are supported by tolerance” (Rutten 2018: 1223-24). Another example of

the use of QCA in economic geography research is Li and Bathelt (2021) comparing 49 linkages between headquarters and their subsidiaries with regards to knowledge strategies and spatial configurations. They found “that spatial structures and agency are fundamentally intertwined and influence each other” (Li and Bathelt 2021: 366). Similar to the Rutten (2018) paper, this dissertation also looks at which structural conditions enable economic development outcomes in places and similar to the Li and Bathelt (2021) paper, this dissertation examines the relation of agency and structure. Thus, QCA is a method deft at handling research questions that deal with conditions, actors, and economic development outcomes.

4.2.2.1 Meta-data collection

In order to conduct a qualitative comparative analysis, meta-data on case studies was collected from the extant place leadership literature. The Scopus database was queried on 21 July 2021 and the initial query followed the ‘broad Scopus search’ protocols from the literature review by Beer, Sotarauta, and Ayles (2021). Publications with the words ‘place leadership’ or ‘place-based leadership’ and other names that this literature goes by, appearing in the title of the article, its abstract, and its keywords were searched for. The broad Scopus search returned 404 publications and further limiting to journal articles in English yielded 251 articles. The abstracts of these 251 articles were read to cull out articles that were not about place leadership and using methods that did not involve case studies. Articles using a micro-level analysis such as on regions, city, neighborhoods, and other subnational systems were included. In instances where the information from an abstract was not clear on its inclusion, the article was included in the collection, at this point to err on the side of caution. This part of the screening process yielded 59 articles.

These 59 articles were iteratively read, and this revealed that 35 articles did not meet the metadata requirements, which are case studies, manifestations of place leadership at subnational level, or low information on contextual conditions. 22 articles were determined to contain cases that fulfill the criteria for inclusion in the metadata. Articles from a previous query were lost in this latest query despite them fitting with the inclusion criteria so these articles were added to the list by this author, which makes 29 articles in the collection. The earliest article in this collection that fulfills the inclusion was published in 2009 and the latest is published 2021. The next step is to select the cases from these articles. This involves defining the universal set characteristics. The idea of a universal case is that all the cases that fulfill these criteria are included in the set whether or not they are observed in the collection of cases gathered from the articles

or in the empirical world (Rutten 2021). The universal set of cases as defined in this dissertation is cases at subnational level such as cities or regions, involving socio-economic oriented policy initiatives, such as development of new industries or a regional innovation system by actors, such as universities, local governments, and professional organizations. 56 have been identified using the criteria that defines the universal set.

Figure 3. Abstraction for Article III

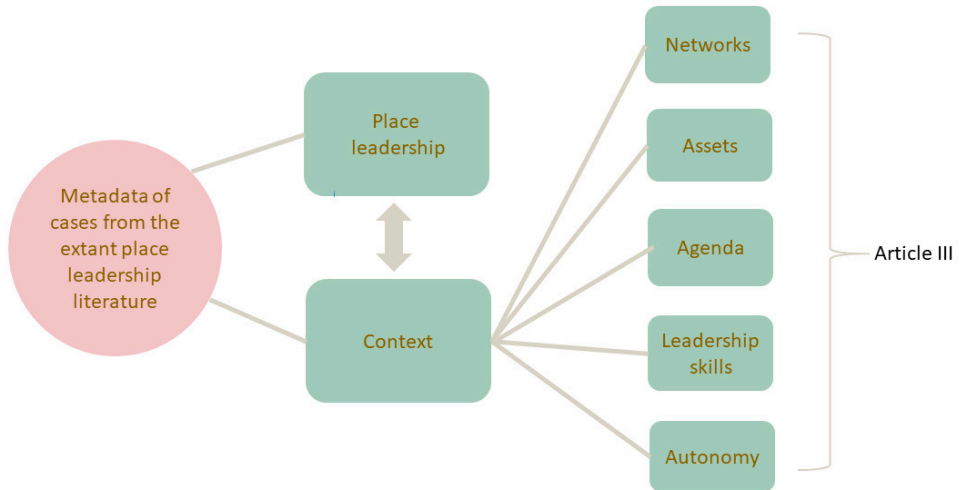


Figure 4. Universa set and observed cases in the selected metadata



4.2.2.2 QCA and its 'analytical moment'

The QCA 'analytical moment' "sets in when all the cases have been specified and all the conditions and outcome have already been measured. At this stage of the QCA-based research process, the main goal consists in finding empirical patterns in the data" (Schneider and Wagemann 2010: 3). The 'analytical moment' of QCA has several steps. First, an 'analysis of necessity' is performed to check whether any condition is necessary for an outcome (Duşa 2018). Necessity is when an outcome will occur if and only if the condition is also present. An 'analysis of sufficiency' is also conducted which refers to conditions that are always present with the occurrence of an outcome (Schneider and Wagemann 2012). This is followed by the generation of a truth table, where each row represents all the possible combinations of the selected conditions for the outcome (Pagliarin, Hersperger, and Rihoux 2020). This number of possible combinations of conditions are created following the 2^k rule, with k being the number of conditions (Duşa 2018).

The truth table is then used for the 'logical minimization process' which involves finding different solutions paths where the outcome also occurs (Schneider and Wagemann 2012). The intermediate solution is typically reported (Ragin 2009). The intermediate solution shows the configurations without any contradictory assumptions (Schneider and Wagemann 2012). A standard analysis and an enhanced standard analysis are conducted to identify tenable and untenable assumptions. These assumptions are excluded from the enhanced minimization process (Duşa 2018). The QCA moment can be performed with the aid of software such as R, an open-source tool using the QCA and SetMethods packages developed specifically for this method (Medzihorsky et al. 2016).

4.2.2.3 QCA and critical realism

QCA is originally a critical realist informed method developed by Ragin (1987) despite applications of the method that adhere to Humean empiricism (Rutten 2021). QCA and critical realism are compatible because they share ontological and epistemological assumptions (Gerrits and Pagliarin 2020; Gerrits and Verweij 2013; Rutten 2020). Specifically, QCA upholds an important feature of critical realism in that it "separates epistemology (empirical statements) from ontology (causal claims)" (Rutten 2021: 3). This avoids the epistemic fallacy that Bhaskar (1983) strongly cautions against. The QCA 'analytical moment' generates a truth table that demonstrates this avoidance of the fallacy and implicitly acknowledges a stratified world (Rutten 2021). The truth

table shows that whilst paths are identified as combinations of conditions leading to an outcome, there are also other possible combinations that are merely unobserved in the data (Rutten 2021). Remember that critical realists believe that the world is real but the ability to know this world will always be partial and that outcomes happen outside researchers' observations but that they are equally as real as the ones observed. "Interpreting truth table analysis findings into causal claims closely follows critical realism's principles of ontological realism (causal explanations), epistemic relativism (descriptive empirics), and judgmental rationality (substantive interpretation)" (Rutten 2021: 11-12). QCA then offers a method that allows a critical realist stance to cohere with its philosophical foundations.

Moreover, the practice of causal inference in QCA also adheres to critical realist philosophy. This is because QCA permits "normic statements, that is ontological tendencies that explain why the presence of a cause makes it possible for human agents to achieve the outcome but does not determine that they will" (Rutten 2021: 3) (cited Collier 1994: page 64). As such, "QCA can account for the contingency of social phenomena" (Gerrits and Verweij 2013: 167). Causal inference is not determined from observing empirical regularities that offer deterministic accounts of the relationship between conditions and outcome (Rutten 2021). Instead, "QCA is strongly committed to ontological realism where causal inference is a matter of substantively interpreting empirical findings (consistent set relationships) and knowledge of cases and context into plausible explanations" (Rutten 2021: 5). This is an example of retroductive reasoning that was discussed previously, which is the approach critical realists take when constructing explanations of the generative processes involved in bringing about a social phenomenon (Rutten 2021).

4.2.2.4 Advantages and limitations

The research opportunity for the application of QCA to studying agency in economic geography is immense, particularly when literatures are rich in case-studies contextualized in different locations (Beer and Irving 2021). QCA can synthesize a large number of cases and thus, enable cross-case learning from these case studies in order to accumulate knowledge, which in turn, can fulfill the desire where "knowledge can be transferred from case to case and from research to practice" (Verweij and Trelle 2019: 300). Knowledge that QCA can help glean includes the identification of the enabling conditions for different outcomes of interest in the study of local economic development. Some may argue that qualitative oriented cases should not be quantified

at all, and that qualitative data should not be dichotomized (Verweij and Trell 2019), because doing so breaks the fidelity of doing a qualitative study. However, social scientists conducting qualitative studies often implicitly make judgements on the degrees of the quality of conditions, for example when they assess and speak about how strong a network is based on how often people meet or collaborate, how good the leadership skills are of actors, or how much independence a group of local actors have in shaping policy. These questions are questions of degrees and by calibrating and assigning a score to conditions of interest in QCA, these implicit judgements become more explicit, formalized, and transparent, allowing for more scrutiny.

Moreover, QCA provides opportunities for replication that need less time and resources, relative to other qualitative methods. For example, whilst comparative cases studies are also transparent in the sense that data on interviewees are available, it would be very difficult to replicate those interviews without considerable investment in time and resources. Whereas QCA makes it easier to replicate a qualitative study given how data and coding scripts are documented and typically submitted to journals accompanying articles, if best practices are followed. Moreover, applications of QCA demands reporting of key elements of the method such as the calibration process, the truth table, and the intermediate solution. The calibration process, where one assigns scores to qualitative indicators, is one of the most critical steps in the QCA analysis and best practices demand that the judgement of how to assign scores is explained explicitly and in detail.

On the other hand, a limitation of the way the QCA coding was done in this dissertation is that the calibration of the cases did not involve a second coder that can corroborate the interpretation of cases and coding of the cases. Additional coders independently coding the data and arriving at similarly calibrated scores would have increased the validity of the scoring process. Nevertheless, as much as possible, every case was carefully coded according to the parameters of scores selected and based on the determined conceptual framework. The scoring is transparently discussed in the appendix of the third article. Another limitation in the scoring of the QCA case material in this dissertation is that it was not corroborated with the authors of the original case studies. Although an advantage of this approach is that it leads to more consistent scoring of conditions across different cases, there is a risk of misinterpreting the degree in which a condition or outcome belongs to a set. However, this scoring was done very carefully, and for the purposes of collecting meta-data and calibrating scores, consulting richly detailed and described cases in the articles, suffices.

Table 4. Meta cases for QCA

| Cases | Authors | Year | Policy actions |
|---------------------------------------|--------------------------------------|-------------|--|
| Wuxin, China | Zhang et al | 2021 | Transition to solar energy production and consumption |
| Mönchengladbach, Germany | Herzog & Hamm | 2021 | Transforming from an old industrial area |
| Gelderland Province, Netherlands | van Aalderan & Horlings | 2020 | Development of wind energy |
| Flevoland Province, Netherlands | van Aalderan & Horlings | 2020 | Development of wind energy |
| North-Holland Province, Netherlands | van Aalderan & Horlings | 2020 | Development of wind energy |
| Amsterdam, Netherlands | Sancino & Hudson | 2020 | Transformation to a smart city |
| Bristol, UK | Sancino & Hudson, Hambleton & Howard | 2020, 2013 | Transformation to a smart city |
| Milton Keynes I, UK | Sancino & Hudson | 2020 | Transformation to a smart city |
| Chicago, United States of America | Sancino & Hudson | 2020 | Transformation to a smart city |
| Curitiba, Brazil | Sancino & Hudson | 2020 | Transformation to a smart city |
| Melbourne, Australia | Sancino & Hudson | 2020 | Transformation to a smart city |
| North Jutland, Denmark | Sotarauta et al, Norman et al | 2020, 2017 | Upgrading maritime industry |
| Southern Denmark | Sotarauta et al | 2020 | Developing an offshore wind energy industry |
| Scania, Sweden | Sotarauta et al, Norman et al | 2020, 2017 | Developing a biogas industry |
| Värmland, Sweden | Sotarauta et al | 2020 | Diversifying forest industry to a bioeconomy |
| Tampere, Finland | Sotarauta et al, Sotarauta & Suvinen | 2020, 2019 | Development of the clean technology path |
| Central Finland | Sotarauta et al, Sotarauta & Suvinen | 2020, 2019 | Development of the biotechnology path in Central Finland |
| Lower Austria | Benner | 2019 | Development of a regional innovation system |
| Bolzano Alto Adige/South Tyrol, Italy | Benner | 2019 | Development of a regional innovation system |
| Newcastle City Futures, England | Vallance et al. | 2019 | Development of a semi-formal university collaborative platform |
| Prato II, Italy | Chaminade et al. | 2019 | Management of an old textile cluster in decline |
| Borås, Sweden | Chaminade et al. | 2019 | Management of an old textile cluster in decline |
| Province of BC, Canada | Van Staden et al. | 2019 | Pursuit of neoliberal policies towards agglomeration |
| The State of WA, Australia | Van Staden et al. | 2019 | Pursuit of regional development through investment shifts |
| North West Tasmania, Australia | Fairbrother et al. | 2018 | Pursuit of neoliberal policies towards regional development |
| Westerkwartier, Netherlands | Horling et al. | 2018 | Creation of experimental platforms from local initiatives |
| Leeds City Lab, England | Chatterton et al. | 2018 | Creation of co-production spaces and experimental platform |
| Agder, Norway | Normann et al. | 2017 | Creation of green fields |
| South Savo, Finland | Normann et al. | 2017 | Creation of green fields |

| | | | |
|--------------------------------------|----------------------|------|---|
| Trent Basin Development, England | Rossiter and Smith | 2017 | Creation of sustainable green spaces |
| Nottingham Biotech Sector, England | Smith et al. | 2017 | Creation of a bioscience cluster |
| Zaozhuang, China | Hu & Hassink | 2017 | Management of an old mining region |
| Fuxin, China | Hu & Hassink | 2017 | Management of an old mining region |
| Liverpool City Region, England | Anderton | 2017 | Development of knowledge intensive industries |
| Brescia, Italy | Budd et al. | 2017 | Management of a sports system |
| Graz, Austria | Budd et al. | 2017 | Management of a sports system |
| Maribor, Slovenia | Budd et al. | 2017 | Management of a sports system |
| Milton Keynes II, England | Budd et al. | 2017 | Management of a sports system |
| Reykjavik, Iceland | Budd et al. | 2017 | Management of a sports system |
| Birmingham, England | Horlings et al | 2017 | Support for innovation in manufacturing |
| Eindhoven, Netherlands | Horlings et al | 2017 | Support for innovation in manufacturing |
| Gippsland, Australia | Fairbrother | 2017 | Creation of sustainable forms of energy |
| Twente, Netherlands | Benneworth et al | 2017 | University engaging in RIS |
| Tromso, Norway | Benneworth et al | 2017 | University engaging in RIS |
| Oulu, Finland | Benneworth et al | 2017 | University engaging in RIS |
| Invercargill, New Zealand | James et al. | 2016 | Transformation of a small city |
| Munich, Germany | Evans & Karecha | 2014 | Fostering economic resilience |
| Prague, Czech Republic | Blazek et al | 2013 | Developing an RIS |
| South Moravia, Czech Republic | Blazek et al | 2013 | Developing an RIS |
| Moravia-Silesia, Czech Republic | Blazek et al | 2013 | Developing an RIS |
| De Hoogte in Groeningen, Netherlands | Mullins & Van Bortel | 2010 | Regeneration of a neighborhood |
| Lozells in Birmingham, England | Mullins & Van Bortel | 2010 | Regeneration of a neighborhood |
| Prato I, Italy | Bailey et al | 2010 | Management of an old textile cluster |
| West Midlands, UK | Bailey et al | 2010 | Restructuring of an old automobile industry |
| Wheatbelt, Western, Australia | Kroehn et al. | 2010 | Development of an oil industry |
| Eyre Peninsula, Southern Australia | Kroehn et al. | 2010 | Development of an aquaculture industry |

4.3 Empirical material across the articles

In Article I, entitled “Agency and resilience in the time of regional economic crisis”, the research question is “how does agency emerge and function in the context of regional economic crises?” The aim of this paper is to contribute to further using the agency perspective in the resilience framework. Since the focus is to identify the emergence of agency, qualitative material is more appropriate to use than quantitative ones. The comparative case study on Lund and Södertälje was used as this article’s method in generating its empirical material. The comparative case study examined actors involved, regional context, networks, and coalitions. Themes examined are based

on this author's reading of the resilience, agency, and institutional literature, which constitute the conceptual framework of the first article. In order to answer the research question, key themes were abstracted from the empirical material as central areas of analysis. Key themes were on regional assets, how the region is organized, the actors involved and their connections to one another. Based on these connections, the behavior of local actors in forming coalitions in order to respond to economic crises and emergent outcomes for the region, were examined.

In Article II, entitled "The consequences of timing norms and term limits on local agency", the research question is "how do term limits affect actors enacting policy initiatives and institutional changes in regions?" A close analysis of the transcripts made visible key themes emerging that were not part of the conceptual framework from Article I and this is how temporality became apparent as an important factor in the emergence of agency and the mobilization of resources. More specifically, it seemed to be timing norms, a specific institution that came in the form of term limits, that seemed to engender the scope for action, and this is why this is the focus of the research question for this paper. The comparative case study from Article I is also utilized in Article II. In order to analyze temporality further, more interviews were conducted, with questions focused on term limits and timing norms in relation to agency in order to understand the ways in which temporality entered the agentic process.

In Article III, entitled "The different paths from which place leadership can manifest: a meta-analysis using qualitative comparative analysis (QCA)", the main aim is to contribute a synthesis of the findings from the extant place leadership literature that show the contexts that enable the manifestation of place leadership, a form of agency. Thus, the research question is "which conditions enable the manifestation of place leadership". The empirical material used in this article is the metadata collected from case studies from the extant place leadership literature spanning 2009-2021. A comprehensive literature review was conducted following the search protocols of the definitive literature review conducted by Beer, Sotarauta, and Ayles (2021) on place leadership. Cases collected were scored for QCA purposes and the QCA 'analytical moment' was performed to generate empirical finding on the conditions that enable place leadership to manifest.

5 Overview of articles

Theoretically, this dissertation situates within the agency strand of the economic geography literature with all three articles centering on exploring the behavior of actors as they interact with institutions at the micro-level, in efforts towards local economic transformation. Article I used the agency perspective in examining regional economic resilience. Article II used the agency perspective in studying how temporality influences how actors engage with regional economic transformations, particularly in how actors are constrained by micro-level institutions such as timing norms and term limits. This further explicates the link between agency and institutions. Article III uses the place leadership concept and provides a synthesis of the literature covering over a decade of place leadership research from 2009-2021. Article I and Article II offer additional empirical evidence on investigating the aftermath of plant closures due to economic restructuring and efforts to repurpose infrastructure and resources left-behind (Smith, Rossiter, and McDonald-Junor 2017). Article I and II also augment empirical evidence on the role of universities and local government units such as municipalities, in economic change processes (Benneworth, Pinheiro, and Karlsen 2017). Article III offers three solution paths or combinations of conditions that enable the manifestation of place leadership in places.

The first article, “Agency and resilience in the time of regional economic crisis”, published in *European Planning Studies* (David 2018), uses a comparative case study on the closure of an R&D facility in two regions to examine regional economic resilience from an agency perspective. Findings include the importance of a networked region in order for agency to emerge from non-state actors whilst a less networked region needs external help from national governments. This paper shares similar findings from Bristow and Healy’s (2014) seminal article using the agency perspective in studying regional resilience, that is that the interactions of actors are due to how a region is organized, as well as the conditions and particularities of its institutional context, which affect how actors collectivize in initiating regional policies. Article I finds collective action is possible, despite an initial lack of networks, when there is an alignment of interests and agendas that can coalesce around a policy initiative. This

article also finds that the conditions for the emergence of agency, coalition behavior, and collective action are temporary and rooted in the aftermath of regional economic crises. This aligns with the empirical evidence on temporary coalitions that ebbs and flows across the life cycle of a policy initiative (Dawley, MacKinnon, and Pollock 2019). This paper also finds that actors have differing agendas, and conflicts in resource distribution can arise because of it, affecting the outcomes for adaptation and adaptability. This paper also contributes an account of agency that captures the influence of political processes within organizations on regional economic transformations.

What do the findings of the first article contribute to economic geography? These findings show actors to be agenda-driven, and power distributional dynamics are mediated and negotiated by actors, whilst manifesting agency. It contributes an examination of actors at the micro-level where they enact their agendas while traversing their organizational roles and shape how organizational resources are partially allocated. Mapping this process adds to the understanding of how regions enact policy, with actors at the helm, attempting to transform their local economic trajectories. It highlights the long-held belief that agentic processes are critical to understanding regional transformations. Moreover, unpacking the nature of actors nuances the agency literature further and enriches the conceptual and theoretical framework examining individual behavior. This paper contributes to further developing a micro-level toolbox for understanding regional economic resilience.

The second article, “The consequences of timing norms and term limits on local agency”, published in *Environment and Planning A: Economy and Space*, builds upon the empirics of the first article but goes deeper into specific institutions affecting the temporality of agency, such as timing norms (David 2021). It examines term limits, specifically, and the effect of its renewability on local policy initiatives and attempts at institutional change. It forwards three propositions: the renewability of term limits generates incentives in enacting policy initiatives, term limits are reproduced in the timing norms of policy initiatives enacted by actors, and term limits shape actor strategies in the agentic process. This paper finds that actors with non-renewable term limits, such as university vice chancellors, imbue policy initiatives with their advocacies while actors subject to renewable term limits, such as politicians, choose policies that expand public expenditures in order to help them secure re-election. The academic calendar tends to set the timing of policy initiatives when university actors lead policy actions. Whereas the political business cycle (Klein and Sakurai 2015) tends to be in

place when political actors lead. This is demonstrated in the Södertälje case in that policy milestones were coordinated with the electoral schedule allowing actors with the possibility to renew their term.

The Lund case, on the other hand, shows that an actor with a single term attempts to embed and attribute their agenda within the organization through layering. The Södertälje case shows that an actor who can renew their term through re-election attributes policies to themselves to signal performance to voters in order to increase the probability of getting re-elected. Actors in both Lund and Södertälje engaged in layering to attempt institutional change across different stages of their policy initiatives. Temporal layering was used in the initial stages to create a sense of urgency or window of opportunity in building coalitions in support of policy initiatives. Temporal layering is highly dependent on regional context for it to be compelling and meaningful. Layering, however, is limited in binding organizations to the agendas of outgoing actors particularly when their terms have expired. However, if successors are aligned with the agenda of their predecessor, then support for their policy initiative and continuity in resource allocation is possible.

What do the findings of the second article contribute to economic geography? This paper contributes to a more 'time-sensitive' economic geography and further articulates how temporality affects actors and ultimately, the agentic process in local economic transformations. Timing norms, a concept borrowed from organizational studies, contributes key components to the generative processes of how actors behave when engaging in policies for local economic transformation, whilst deeply anchored to institutional theory. In turn, it enhances the understanding of why non-firm actors like universities and governments, behave the way they do during a crisis, and how their advocacies seep into the agenda of organizations and their modes of actions. Knowing this can show the predilection of a region or an organization for agency, and which actors are best positioned to act sustainably where and when economic troubles start brewing. These findings highlight the importance of institutional change in policy processes and the limitations of layering in generating permanent institutional changes. Moreover, layering reveals the intentions of actors in attempting to steer other actors into continuously allocating resources to their policy initiatives in the future. By using institutions based on procedural rules, such as term limits, as a key unit of analysis, Article II contributes an expansion of the range of institutions examined in the study of agency in economic geography and goes deeper into micro-level institutions.

In the third article, “The different paths from which place leadership can manifest: a meta-analysis using qualitative comparative analysis (QCA), as the title suggests, the paper conducts a meta-analysis on the extant place leadership literature in order to take stock of and synthesize over ten years of case studies. The ambition is to accumulate knowledge from the case study-rich literature on place leadership. This paper finds that three causal combinations of conditions can enable place leadership to manifest. The first path says that a combination of strong networks, assets in places, and good leadership skills can enable place leadership to manifest. The second path says that a combination of a coalesced agenda of competing interests, assets in places, autonomy in funding and steering from the national government, and strong networks enable local leaders to manifest place leadership. The third path has the combination of conditions of a unified agenda: autonomy in funding and from steering from a centralized authority, strong network, and exemplary leadership skills can enable local leaders to manifest place leadership.

What do the findings of the third article contribute to economic geography? The three paths suggest that no one condition alone enables place leadership to manifest, not even the presence of strong networks of actors, a condition that has consensus in the place leadership literature as something important underpinning local policy actions. Instead, combinations of conditions in places make it possible for human actors to engage with their context and enable launching meaningful policies to transform places. The three solution paths and the cases they cover also imply that while it is possible for different places to share similar paths for local economic development, there is no one single recipe for activating place leadership so care must be taken in recommending the replication of success stories without first examining place specificities and unique contexts in places.

By collecting the empirical findings from different case studies across the extant place leadership literature and using this collection as its metadata, this dissertation demonstrates the external validity of this important body of work and can inform prescriptions for policy making when dealing with economic crisis across different regions. Furthermore, it contributes to the accumulation of knowledge in the study of place leadership in economic geography and lends clarity to which contexts make it possible for actors to engage in meaningful policy actions in the service of local development. Moreover, QCA is not, as of yet, widely used in the field of economic geography (Rutten 2018). Using this method answer calls for methodological

innovation in the place leadership literature, specifically (Beer and Irving 2021) and in economic geography, generally.

Table 5. Summary of papers

| Article | I | II | III |
|------------------------------|---|---|---|
| Title | Agency and resilience in the time regional economic crises | The consequences of timing norms and term limits on local agency | The different paths from which place leadership can manifest: a meta-analysis using qualitative comparative analysis (QCA) |
| Author | Lucinda David | Lucinda David | Lucinda David |
| Research Question | How does agency emerge and function in the context of regional economic resilience? | How do term limits affect actors enacting policy initiatives and institutional changes in regions | Which conditions enable the manifestation of place leadership |
| Focus | Theoretical and empirical contribution to an agency view of resilience. | Theoretical and empirical contribution on the generative process between actors and micro-level institutions like term limits and timing norms. | Theoretical contribution on three paths that enable place leadership. Heeds call for methodological innovation using QCA. |
| Theoretical Framework | Agency perspective in resilience and neo-institutionalism; adaptation and adaptability. | Agency perspective, timing norms, term limits and institutional change like layering. | Place leadership, context, and conditions. |
| Level of analysis | Regions and actors within the region. | Regions and actors within the region. | Actors at the local level. |
| Methods | Comparative case study; semi-structured interviews. | Comparative case study; semi-structured interviews. | QCA using metadata of case studies from extant place leadership literature |
| Findings | Agency emerges from networked regions but less space for state intervention. Agendas of actors impact adaptive strategies such as coalition formation and raising distributional conflicts. | The possibility to renew term limits shape how actors pursue policy initiatives. These initiatives are found to be in-sync with the term limits of particularly in the schedules of policy milestones and operations. Actors actively shape timing norms. | Three solutions paths enable place leadership to manifest. Path 1 combines networks, assets, and leadership skills. Path 2 combines agenda, assets, autonomy, and networks. Path 3 combines agenda, autonomy, network, and leadership skills. |

6 Conclusions

This dissertation set out to answer the overarching question why and how local actors' responses to economic crises vary across time and place. Firstly, on the question on why. This dissertation has found that responses of local actors vary because different actors face varied sets of contexts that underpin their reflexivity, decision-making, and strategies for action. These contexts also matter in shaping the constraints and available opportunities to collectivize with other actors for launching policy actions. Actors encounter these constraints and opportunities in several ways: how governance structures are organized in places, as procedural rules like term limits within organizations to which they belong, and as local conditions for enacting plans related to economic development. Secondly, on the question on how. The responses of local actors to economic crises across places vary in several ways. It varies on who responds, how they respond, the types of institutional change they attempt if they attempt it at all, and which policies they choose to champion. The dissertation shows these variations in two sets of relevant cases in the comparative case study and in 56 cases from the metadata. The number of cases can raise valid questions about generalizability and external validity of these findings (Gerring 2007). However, the ambition of this dissertation is not to explain causal inference through empirical regularity typical of positivist work. Instead, the ambition is to provide plausible explanations of agentic processes in transforming places with the use of empirical evidence and theory that is coherent with critical realism.

Different actors in varied places take on leading roles in responding to economic adversities. In the comparative case study conducted for this dissertation, it was the municipal government in Södertälje taking the lead to respond to the closure while working with the private sector and the national government. In Lund, the local university took the lead while working together with a philanthropic organization and a regional governance body. In both cases, actors built science parks in order to replace the R&D facility left behind by the closure. In addition, the metadata collected for the QCA process shows a diverse set of place leaders such as chambers of commerce, unions, private firms, port authorities, regional governing bodies, and entrepreneurs

launching equally diverse policies to contribute to building regional innovation systems, smart cities, green technologies for sustainable transition, civic community centers, and new path creation and renewal. Although the collection of the meta-data used to generate these findings was based on a systematic and exhaustive literature review, it does not capture all cases that exhibit place leadership in the extant literature. However, as much as possible, a wide net was systematically cast to capture relevant cases of socio-economic policy engagement by different actors in different places.

This overarching question was followed by sub-questions that look more closely at the different components of the overarching question. For the first research sub-question, “how do agentic responses emerge and function in times of local economic crises?” this dissertation sought to answer this by gathering empirical evidence in two main ways. Firstly, it examined policy responses to the closures of two research and development facilities in Lund and in Södertälje in the comparative case study. It also synthesized empirical evidence from the extant place leadership literature, examining actors enacting meaningful policies in their respective locales. The empirical evidence from Articles I, II, and III show that local firm and non-firms actors launch initiatives to respond to different forms of economic adversity. These can come in the form of policy actions that are advanced through collaborations between different actors representing different organizations. While these findings offer plausible explanations of agentic behavior, the empirical evidence does not mean to suggest that actors will always behave in this way under similar circumstances. Agency is contingent on different context and unexpected factors may counteract decisions for actions, even when faced with similar circumstances as the ones shown here. What these empirical findings do suggest is that it is possible that the agency of actors, the outcomes of their reflexive processes, and the strategies they choose to employ for transformative change can be enabled by the contexts described here.

The second sub-question on “how does the temporality of agency affect the behavior of actors?” is mainly answered in Article II and it found that the temporality of agency affect the behavior of actors in three main ways. Firstly, sources of temporality such as timing norms and term limits incentivize actors to pursue initiatives that reflect their advocacies or their interests in renewing their terms if it is possible. Secondly, since term limits impose inter-temporal shifts in access to resources for policy initiatives to receive continued support, actors attempt institutional change through layering. Thirdly, actors also use layering to actively shape timing norms across the life of policy initiatives. Layering can be attempted in the beginning of a policy initiative to convince

actors to join their coalitions and so they can gain access to more resources to support their goals. The sources of temporality on the behavior of actors are myriad and this dissertation mainly captures one important source, term limits. Other sources of temporality may have different effects on agentic behavior and on policy engagement and may even counteract the effects of term limits. This dissertation does show, however, that timing norms and temporal sources are potential explanatory factors for agentic processes, and thus need to be examined when looking at the behavior of actors.

The third sub-question is on “which contexts enable actors to pursue actions to transform a place?” This question is answered in Article I and Article III. Article I shows that plant closures and the economic uncertainty and opportunity it brings can spur non-firm actors to engage in temporary modes of action and mobilize resources towards transformative policy initiatives in places. Article III of this dissertation answers this question more explicitly by synthesizing the exact causal combinations of conditions that enable place leadership from the extant place leadership literature. It found three combinations of conditions that constitute the context in which actors are enabled to pursue actions to transform places. In the first combination, conditions of strong networks and assets that actors with exemplary leadership skills can valorize, are found to enable the pursuit of meaningful policy actions to transform a place. In the second combination, strong networks that are able to coalesce competing interests into one unified agenda and have the autonomy to valorize certain assets and implement policy actions can enable actors to enact transformative policies. The third combination of conditions says that strong networks with a coalesced agenda and good leadership skills, plus autonomy in funding and from steering by external forces can enable actors to pursue meaningful policy actions. These findings are based on meta-data with cases that have varied circumstances and further testing is needed to examine whether these combinations of conditions can bring about meaningful policy engagements by actors despite differences in geographical contexts.

Across the three articles, this dissertation finds that actors can have profound influence on the processes of transformation in places that matter to them. They can take up roles and positions that push for local economic development policies that reflect their aspirations for themselves and for the places in which they live. These roles give actors access to resources to mobilize and the impetus to launch collective action in order to actualize policy initiatives in response to economic adversities like plant closures. In order to manage inter-temporal changes to their access to resources, they engage in activities that attempt institutional changes. Some of these actions and policies succeed

and some are less successful. Actors need to navigate the contexts in which they find themselves because actions are enabled or constrained by structures with which they interact. This is what makes the process of agency contingent and why the responses of local actors to economic crises so varied.

6.1 Outlook

This dissertation has contributed to understanding the role of actors in local economic transformations and the context that constrain and enable their actions by interrogating how actors respond to place specific economic adversities as well as their involvement within place-based policy processes. Moreover, this dissertation has also engaged in further conceptualizing institutions in the agency perspective by looking at micro-level institutions that directly link actors with structures. These links allowed this dissertation to explicate generative processes on how micro-level institutions affect and enable the decisions of actors in policy intervention and resource mobilization, and how actors maneuver these institutions when collaborating with other actors. Thus, this dissertation has demonstrated the value of examining micro-level institutions at the level of organizations. Future research on agency and institutions should further explore formal rules and informal rules such as social norms, at the level of organizations, that can potentially be important explanatory factors in how and why actors engage with their localities and partake in policy actions that attempt to transform their communities.

Moreover, by looking at micro-level institutions within organizations such as timing norms and term limits, more attention was paid to the temporality of agency and in particular, the sources of temporality and constraints. Examining temporal structures contributes a demonstration of how timing norms, like a university calendar or a political election cycle, can influence how actors engage with regional economic transformations. This has shown that time is not just a setting for agentic processes, it is also a structure that actors respond to, attempt to manage, and try to actively shape in their favor. This suggests that future research should delve into organization-specific timing norms that may be directly shaping the possibilities for agentic behavior. Furthermore, research aiming to contribute to a more time-sensitive economic geography must treat time not as a passive but instead active ingredient in the process of local economic transformation.

This dissertation also showed that institutional change is done iteratively and largely improvisational across the policy process. As this could be one of the sources of variations of outcomes of economic development in places, future research should look into how actors choose to improvise strategies for institutional change and what heuristics they are using in formulating these strategies. Furthermore, this dissertation showed two intentions by which institutional change is undertaken by actors: firstly, in order to convince other actors to join coalitions championing a policy and secondly, in order to influence intertemporal resource allocations. This suggests that intentionality behind institutional change is an important ingredient in how policies unfold and should not be ignored when examining agentic processes. This dissertation has also demonstrated that layering, as a strategy for institutional change, is limited in its ability to bind actors to the agendas of their predecessors. Layering also targets timing norms and actors attempt to shape them in ways that are geographically bound in meaning and persuasiveness. Given these limitations, future research looking into institutional change, should investigate further its different moving targets and temporal dimensions of this process.

Moreover, this dissertation has demonstrated that whilst different cases of agentic processes are contextualized, as they should, many cases can also have meaningful similarities on which a comparison can be anchored, just as Beer et al (2019) have previously shown in their comparison of cases of place leadership across six countries. Comparisons of cases of agentic processes are useful in order to accumulate knowledge in the field. Thus, future research directions in agency and the micro-level foundations of local economic development should continue exploring the similarities and differences across cases of agency or the lack thereof. For example, there have been further plant closures by the pharmaceutical company studied in the comparative case study here, as well as other global pharmaceutical companies streamlining their research and development operations. It would be interesting to see how agentic responses to these plant closures differ or share similarities across countries and whether processes of regional development match or deviate from the comparative case study conducted in this dissertation.

Findings from this dissertation show that agency is not an inherent character of a place but are temporal modes of action that are triggered by economic uncertainties. Future research directions should include looking at how places can nurture conditions that can help agentic processes to emerge and increase its longevity. Temporal modes of actions within agentic processes include the waxing and waning of coalitions that form

in order to champion policy initiatives that aim to transform places. Future research should look into how places can support policy initiatives that come out of these agentic processes long after the coalitions that championed them have disbanded.

Lastly, this author is keenly aware that the actors examined in this dissertation, both in the case study and in the meta-data, have agency but also resources, power, and position. Given how local economic development can only be meaningful if its benefits are distributed equitably in society, questions regarding ‘agency for whom’ must be raised. This means looking into how much potential for agency do different groups of people have, especially those with relatively less power and resources to effect change. Are different actors being adequately represented in the agendas and policies for local economic transformation? These questions reflect how this dissertation has not only answered some questions in the field but has also opened up further lines of inquiry into the depth of importance of agency in understanding the disparities in economic development across time and place.

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