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## 17. Investigating agency: methodological and empirical challenges

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### INTRODUCTION

Studies of regional development have often focused on structural preconditions such as resource endowments, infrastructure, institutions, human capital, or support structures for innovation and entrepreneurship. In contrast, agency is an essential but understudied factor for regional development and in particular regional structural change (Asheim et al. 2016, Boschma 2017, Uyarra et al. 2017). This relates to the fundamental debate in social sciences about agency and structure (e.g. Jessop 2001, Giddens 2007[1984]), which has often remained theoretical while the empirical evidence has been cumulating slowly.

Moreover, many of the empirical studies have been more descriptive than analytical. Indeed, as Boschma (2017, 358) argues ‘little to no attention has yet been paid to the role of agency, and the different types of agents that may drive regional diversification’. However, the interest towards agency also in the context of regional innovation and path development has been mounting, and many scholars now focus on purposive actors instead of simply theorizing the need to study them or describing their existence or absence in different contexts (Karnøe and Garud 2012, Dawley 2014). Yet, research efforts have only begun to connect agency with structural conditions and the opportunities for change in particular regions and particular points in time (Grillitsch and Sotarauta 2020).

Consequently, this chapter aims at addressing the following key questions:

- What is particular about studies of agency and structure in studies of regional development?
- What are the challenges in this regard and how can we address those?

Importantly, there are relatively few systematic studies of agency in the context of regional development. This chapter presents our own struggles in developing an adequate methodology to study intersections of structure and agency for the ReGrow (Regional Growth Against All Odds) project. This Scandinavian project covering Finland, Norway and Sweden aims to identify to what extent, and how, various actors and actor groups have shaped regional growth trajectories. Twelve comparative in-depth case studies focus on the role of agency in regional development. In the

process of conducting the case studies, we have reflected, revised, and improved the methodology (Appendix 1 provides a short description of the project).

This chapter aims to share our experiences for the future studies focusing on the relationship between agency and structure. In the course of the project, we identified the following seven challenges:

- Getting the ontology right
- Getting the research design right
- Getting the time period right
- Getting the spatial scale right
- Getting the research instruments right
- Getting the data collection right
- Getting the analysis right

For each of these challenges, which were present in all of our case studies, we discuss (i) their nature in more general terms relating to literature on structure and agency and respective empirical applications, (ii) illustrate the problem with concrete examples from the ReGrow project, (iii) describe our strategy of addressing the challenges, and (iv) provide some reflections about the applicability of our strategy in more general terms. By doing so, we provide insights and potentially guidance to scholars of agency and structure in regional development.

## METHODOLOGICAL CHALLENGES

### Getting the Ontology Right

In studies of agency, it is difficult to develop a clear understanding of what agency means and represents, as it remains a contested concept. This challenge has been debated for long (e.g. Jessop 2001, Archer 2003, Giddens 2007[1984]). As the general notion of agency can be mobilized to study a variety of empirical phenomena where actions or interventions produce particular effects, it is necessary to develop an ontology that suits a specific research question for two reasons: (i) to provide clarity about the objects of study, and (ii) to delimit the scope of the research project. Congruent with the aim to build knowledge on the opportunities and ways regional stakeholders shape regional development, we made the decision to use the notion of agency to only represent human agency.

Human agency is defined as ‘the ability of people to act, usually regarded as emerging from consciously held intentions, and as resulting in observable effects in the human world’ (Gregory et al. 2009, p. 347). We further limited our focus to *change* agency in terms of actions, which aim to, or result in, a break with existing regional development paths (cf. Coe and Jordhus-Lier 2011). We are particularly interested in change agency because only change agency can be the source of regional renewal and transformation beyond mechanical regional consequences to

extra-regional system changes. This fits well with the current debate on regional path development where for instance Isaksen et al. (2019) distinguish between firm-level agency – addressing new firm creation or innovation within existing firms, and system-level agency – addressing change at the level of regional innovation systems.

We did not start with the regional innovation system approach to conceptualize agency but with an in-depth theoretical review about types of agency that have a strong potential to affect regional development, and in particular structural change (Grillitsch and Sotarauta 2020). We identified innovative entrepreneurship and institutional entrepreneurship as two important types of agency, which drive structural change as documented by a large body of theoretical and empirical work. In addition to these two, we find that the relatively new concept of place-based leadership is an important type of change agency in the context of regional development (Gibney et al. 2009, Sotarauta and Beer 2017). Place-based leadership refers to actions that establish common interests, coordinates actors, and mobilizes/pools resources for collective use. These three types of change agency have distinct theoretical roots but often operate together and necessitate each other in shaping regional development trajectories, hence forming what we called the Trinity of Change Agency (TCA). For instance, growth opportunities of entrepreneurial ventures are partly dependent on the institutional context and regional support structures. Even though our studies focused on change agency, we were aware that change agency did not need to be present in every region, and that agency might also be agnostic to, or directed against, change.

Moreover, a study on agency is incomplete or even flawed if it fails to connect agency with structure. In our studies of regional development, the notion of opportunity space was useful because change agency is not only shaped by the past but also driven by perceived opportunities and expectations about the future (Emirbayer and Mische 1998, Garud et al. 2010, Steen 2016). We argued that the opportunity space manifests at three levels (Grillitsch and Sotarauta 2020, 11):

- Time-specific opportunity space: Delineates what is possible given the global stock of knowledge, institutions, and resources at any moment in time.
- Region-specific opportunity space: Defines what is possible considering regional preconditions.
- Agent-specific opportunity space: Captures perceived opportunities and capabilities of individual agents to make a change.

For example, in the case of Ulsteinvik labour market region (coastal Sunnmøre) in Western Norway, we used opportunity spaces and the TCA concept as follows (Figure 17.1 depicts the ReGrow case study regions). Ulsteinvik region is known for its globally leading maritime industry, which depended heavily, however, on the oil price and corresponding demand for offshore vessels for oil and gas. The changing oil price created specific opportunities in time. The capabilities and resources related to designing and producing offshore vessels shaped opportunities specific to the region. The change process itself, however, was highly contingent on the capabilities,



Source: [www.gadm.org](http://www.gadm.org) (2019), map layout by Linda Stihl (2020).

*Figure 17.1 Map of ReGrow case study regions*

power, network and resources of individual agents and groups of them. We then analysed in what ways and to which extent individuals, groups of individuals, and

organizations shaped the development of the region over time using the three types of agency in the TCA concept.

This ontology of agency and opportunity spaces has general relevance for studies of regional development, regardless of the context in which the research is conducted. This is because the types of change agency that we focus on are of a general theoretical nature, and not limited to a particular context. Innovative entrepreneurship, institutional entrepreneurship, and place-based leadership are types of agency that are found and relevant in the Global North and the Global South, in large metropolitan areas and more remote regions. Conversely, the opportunity space is specific to a particular time, region, and agent. Why change agency emerges, how it unfolds, and what the intended and unintended consequences of change agency for regional development are, will therefore partly depend on general structural conditions as provided by a specific time or regional context.

### **Getting the Research Design Right**

Agency and structure are closely related and interdependent, which makes it difficult to disentangle causal relationships. While there has been substantial theoretical debate about the nature of the agency structure relationship, we sympathize with Archer (1982) who advocates for an analytical duality of agency and structure. Empirical studies gain from a clear analytical distinction between the two concepts, which is necessary in order to investigate why and how, at any point in time, structure conditions agency; and how agency subsequently changes or reproduces structure. This also implies that agency needs to be studied over time applying a process perspective (Sotarauta and Pulkkinen 2011, Grillitsch and Sotarauta 2020). An appropriate research design, consequently, needs to provide for a set-up where it is possible to analyse and distinguish effects of agency and structure respectively, and in interaction over time, on regional development.

In ReGrow, we were confronted with what Storper (2011, 333) identified as

one of the great challenges for social science. Cities or regions, like any other geographical scale of the economic system, have complex economic development processes that are shaped by an almost infinite range of forces. There is a thorny question as to what social science should aim to do in the face of such complexity.

A key question for us was how we could distinguish the effects of general structural properties, in our context regional preconditions such as industry mix, human capital endowments and infrastructure, and extra-regional changes over time such as changes in global demand for certain products or product groups from the intended and unintended consequences of the actions of regional stakeholders. Without a credible sorting mechanism of causes and effects, we felt that it would be difficult or even impossible to understand the extent to which, and how regional stakeholders potentially contribute to shaping development trajectories.

In order to deal with this, we combined three case-selection strategies in a multiple-case study framework using both quantitative and qualitative methods. In a first step, we identified a set of *extreme cases*: regions that in some periods have performed much better or much worse than would be expected based on structural factors. In order to do so we reverted to quantitative models that explain regional growth by a number of factors capturing region-specific preconditions such as industry mix and innovation capabilities, as well as generic fluctuations over time. Doing justice to the time dimension necessary to study agency, we run the model for a 25-years period. In order to single out unexpected growth trajectories, we analysed the residuals of the growth regressions. The residuals capture the part of regional growth that is not explained by the structural factors in the model.

In order to distinguish systematic deviations in regional growth from random ones, we investigated the patterns of the residuals. A systematic pattern held two conditions: (i) it is an outlier (i.e. the residual is extreme as compared to other residuals in the respective year; and (ii) it is consistent (i.e. a positive (or negative) outlier in a number of consecutive years). These periods of unexpected and extreme high or low growth were the extreme cases we wanted to investigate. We showed in our analysis that (i) the unexplained part of regional growth after considering structural factors (the residuals) was surprisingly high, and that (ii) systematic deviations in growth were apparent and robust to different specifications of the empirical model. This provided a strong empirical justification to study why such region-specific development trajectories existed and what role agency played in shaping them (for more details, please consult Grillitsch et al. forthcoming).

In a second step, we made a selection from the extreme cases that maximized variation in regional characteristics and allowed for cross-case comparisons. In order to inform our final case selection, we prepared *regional profiles* for each of the extreme cases based on desktop research. These profiles included basic information about location, industry profiles, as well as structural preconditions. Additionally, they included basic descriptions of regional pre-conditions, such as the industrial and knowledge infrastructure, as well as the relevance of exogenous drivers of (economic) change. *Common regional stories* emerged from the comparative analysis of all regional profiles. Such stories pivoted around medium-sized regions with a high share of manufacturing employment, resource dependent Northern regions, cross-border regions, smaller regions with a stronghold in a niche, regions dominated by large firms, and service oriented regional centres.

The common stories led to the identification of regions that operate under similar structural constraints and are objects of similar system changes. For instance, all medium-sized manufacturing regions increasingly faced global competition with resulting reallocation of standardized production. Maintaining or enhancing job and income opportunities for all those manufacturing regions meant a search for new sources of competitiveness by, for example, introducing new technologies or business models. We then selected cases to allow for *comparisons* (e.g. at least two cases for a common story) and *variation* (i.e. cases representing different common stories).

Our proposed research design is thus a form of theoretical sampling, which means ‘that cases are selected because they are particularly suitable for illuminating and extending relationships and logic among constructs’ (Eisenhardt and Graebner 2007, 27). In particular, we aimed to illuminate the interrelations between agency and structure. For instance, analysing agency across a variety of contexts allowed us to identify generic features of agency as well as how context shapes agency. Cases with different development trajectories despite similar preconditions provided a suitable setting for investigating the scope of agency as well as how agency shaped the future development of the respective regions.

Our approach to a theoretically informed multiple case selection is applicable in different settings. After all, the quantitative approach to identify extreme cases is flexible as regards the dependent variable (the outcome that is of interest) as well as the battery of structural variables that the researcher wants to account for. The qualitative approach of identifying common stories with promise for comparison and variation between cases can also be applied in various contexts. The suggested approach provides a systematic framework for studying agency and structure in regional development.

### **Getting the Time Period Right**

Agency is best studied in its full complexity by situating it in the flow of time. An empirical investigation calls for a conceptual framework that is temporally sensitive, actor-oriented and geared to specify the temporal relations between the main phases, critical junctures and relevant actors and their strategies in different phases. In this kind of analysis, agency is not to be located in the attributes of individual actors only, but also in the relationships connecting actors to regional development and institutional changes related to it.

In getting the time period right, it is important to consider the nature of change. Both policy-makers and scholars have a tendency to emphasize changes that are visible deviations from the past. They can be measured, and key actors interviewed. However, institutional change studies show that even major changes more often than not are less iconoclastic than they appear on the surface. According to Streeck and Thelen (2005), the most promising way to study institutional changes is to approach them as gradual transformations. An accumulation of supposedly minor changes over extended periods of time may cause a significant discontinuity, and hence not all incremental changes are adaptive or reactive for continuity of a past path. In this thinking, major changes may surface beneath the seeming stability to produce something that manifests itself to actors as an abrupt change or remains difficult to detect but still gradually shaping institutions. This type of change may be labelled as ‘creeping change’ (Streeck and Thelen 2005).

Consequently, such questions as ‘what are the identified main phases of a regional development process under scrutiny’, and ‘who are the key actors in different phases of developments’, and ‘what kinds of change strategies they adopt’ surface as central. This again highlights the need to compile empirical observations on interaction

patterns between actors, data on actors' interpretations and reflections of their intentions and activities, as well as reflections in connection to a specific change process. Actors' interpretations are central when appraising the relationship between structure and agency. According to Barley and Tolbert (1997), retrospective interview and archival data are valuable in this kind of study, but, of course, we need to be aware that they are subject to rationalized reconstructions. The main focus ought to be on agentic regularities instead of mental models or individual plans. Patterns of interactions, specific in a particular setting, are of interest and that again directs the attention to observable and recurrent activities (Barley and Tolbert 1997).

The kind of process analysis advocated here is needed for five key tasks: (i) identification of critical junctures and types of them; (ii) characterization of event sequences and their properties; (iii) specifying dependencies in temporal sequences; (iv) evaluating theory derived assumptions of agency and causality with the main aim to identify generative mechanisms or a plotline; and (v) recognizing the coherent pattern, which integrates a compelling narrative crystallizing the explanation (applying Pentland 1999, Van de Ven et al. 1999, Poole et al. 2000, Pierson 2004).

Consequently, a methodology is needed that enables the identification of main development phases, critical junctures and the search for influential actors, and their strategies, through the course of events, instead of pre-selection of influential actors according to their formal positions. Often, for pragmatic reasons, the data collection is begun with some known actors identified in the analysis of the secondary data, after that a snowball method is utilized (being aware of its biases).

We define a *main phase* as a distinct and identifiable period between critical junctures in a regional change process. In other words, a phase is the relationship in time between the successive critical junctures. A main phase can be separated from other phases by economic, institutional, agentic and/or structural changes, depending on research questions and the unit of analysis. *Critical juncture* is a particular time period in a sequence of events; it is an analytical device for the identification of main phases and turning points in between them. A critical juncture potentially gives rise to a new path dependent process. In the words of (Pierson 2004, 135), critical junc-

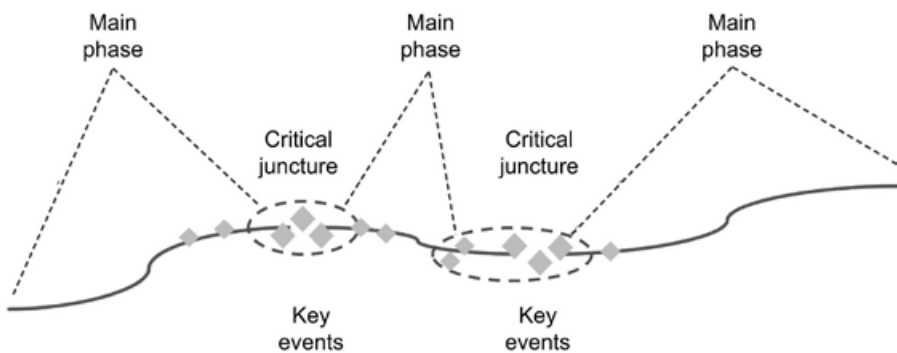


Figure 17.2 Illustration of main phases, critical junctures and key events



tures are ‘critical because they place institutional arrangements on paths or trajectories, which are then very difficult to alter’. At a critical juncture, a change process is open to alternative paths, and actors or exogenous events settle which path it orients to. At a critical juncture, change process is defined by a high degree of contingency and several possible trajectories. Path dependency theories suggest that a regional development path, having been shifted to a new path, often becomes locked in to a new path by increasing returns, externalities, or other mechanisms (Martin and Sunley 2006). Figure 17.2 illustrates the relationships between main phases, critical junctures and key events.

Pierson (2004, 5) defines four criteria that determine whether a system is at a critical juncture or not:

- *Multiple equilibria*: a range of consequences is in general conceivable.
- *Contingency*: Several such future events are possible, which cannot be predicted precisely.
- *Timing and sequencing* are critical. In path dependent processes, when something happens may be of importance.
- *Inertia*: After the emergence of a new path new feedback loops generally lead to a phase that is resistant to change efforts.

Critical junctures are often seen as highly contingent or random, but in regional development analysis, the ambition is to bring forth convincing explanations for why one path rather than another emerged in a critical juncture. Identification of critical junctures is partly based on the identification of key events and sequences of them. *A key event* is a thing of importance that happens or takes place changing a direction of a change process or leading it to consequent significant events. Often, critical junctures are comprised of multiple key events, some of them occurring prior to or after a critical juncture. Applying the definition of an incident by Flanagan (1954, p. 327; see also Makkonen et al. 2012), a key event refers to ‘any observable human activity that is sufficiently complete in itself to permit inferences and predictions to be made about the person [actor/-s] performing the act’. Further, he says an event ‘must occur in a situation where the purpose or intent of the act seems fairly clear to the observer and where its consequences are sufficiently definite to leave little doubt concerning its effects’ (p. 327).

The temporal length of a critical juncture is often not possible to define *a priori*. Moreover, even with a well-defined research question and sound theoretical frameworks, the proper starting point for the identification of a change process can be subject to debate. There is no unerring way to decide how far back in time investigators ought to go when examining a change process or aiming to identify critical junctures through the agentic lens (Bennett and Checkel 2015). In some cases, it may be possible to identify clear junctures and key events, while in some other cases, the change process is so ‘creeping’ that there are no easily detectable, visible junctures or events. Of course, a process tracing needs to begin somewhere, and as Bennett and

Checkel (2015) maintain, investigators should make defensible decisions about how to proceed in their process analyses.

In the ReGrow project, the main phases were identified using an econometric analysis focusing on changes in employment and related structures. Following the econometric analysis, the first qualitative data collection phase was based on a desktop research drawing on published and other documents and reports on the respective cases; this allowed us to characterize the change processes by constructing fact-based temporal sequences of key events at each case. Next, the key actors, identified in the previous data collection phase (not all were identified, snowball method was also used), were interviewed. The fact-based sequence of key events was complemented by subjective interviews. The interview guide was constructed using the data from the previous phases. All the interviewees had had a key role of some kind in one or more critical junctures or in a specific key event. Finally, the case-specific process descriptions were constructed by cross-analysing the constructed interview and secondary data-based observations against the results from the econometric analysis.

In the ReGrow project, to start the empirical analysis, the main phases were identified through the econometric analysis, but another option would be to identify a definitive key event to start the analysis and expand from there both forward and backwards in time. Such a research strategy was used in the institutional analysis of the evolution of regenerative medicine in Tampere, Finland, the first revolutionary clinical treatments serving as anchor key events (Sotarauta and Mustikkamäki 2015). The ReGrow case portfolio would also provide a range of agency related key events to anchor the analysis, prime example being the closure of Nokia's mobile phone plant and R&D activities in a small town of Salo (Finland). At all events, in our approach, the length of a critical juncture was not defined *a priori*. Instead, *critical junctures, key events and main phases accompanied with observations about agency are core outcomes of the empirical analysis*. In some cases, it may be impossible to identify clearly critical junctures at all, the minor changes accumulating in time thus constructing gradually a new path. In some other cases, there may be clear-cut and easily identified abrupt changes forming a juncture (a closure of a major plant, for example). We should be aware, however, that even seemingly abrupt changes may have been boiling underneath of existing institutions for some time before something major surfaces.

### Getting the Spatial Unit Right

When investigating regional development, one has to define spatial boundaries. The definition of a *region* is multifaceted in and of itself, referring variously to jurisdictional boundaries (such as Region Blekinge), a shared culture and identity (such as Gnösjö), statistical units (such as NUTS 2 regions), or functional units (such as labour markets). Some of these units come with administrative authorities, resources and responsibilities such as education or health care, but in other cases the unit of 'region' is a level for which we have collected standardized data on population, industry and society, allowing comparison across regions and over time. In the study

of regional development, we often aim to identify functional units where social and economic processes are at least partly affected by the assets, interaction patterns, and institutions of the specific region in question (Boschma 2004). A common functional unit used refers to labour market regions, which are statistically defined based on commuting patterns, with the purpose of being able to evaluate employment and workforce dynamics. In other words, these are reasonably coherent regions in which people work and live, and in which we can expect actors to be ‘close’ enough (geographically, but also culturally) to interact on a regular basis.

In our investigations with a focus on the role of *agency* in regional development, three concerns regarding the spatial unit quickly emerged. The first followed directly from this fuzzy definition of ‘what is a region’. Although labour markets are the common unit of analysis for (predominantly quantitative) studies in regional development for reasons identified above, these are not the most appropriate unit when (qualitatively) investigating agency and the ways in which governance, responsibility or authority are exercised. Labour market regions are functional regions without administrative responsibilities attached to them, they often include several different municipalities and are often only parts of one or several counties.

In ReGrow, labour market regions seldom overlapped with a single municipality (with the exception of some small labour market regions in the periphery), which added considerable complexity and workload to the case studies. One logical starting point for our desktop research was to consider policy documents and strategies prepared by municipal- and regional authorities. In the case of the labour market region of Olofström-Karlshamn, this implied looking at two different municipalities over a 25-year time period, both part of the same regional county authority (Region Blekinge). In the case of Gislaved, however, the labour market region included four separate municipalities, belonging to two regional counties, where additionally some municipalities established a strong collaboration with other municipalities outside the labour market region in question. In order to cope with this complexity, we constructed maps to clearly mark municipal- and county level boundaries of authority. As with ‘getting the time period right’ the appropriate spatial unit was a result of the analysis. As a guiding principle, we asked ourselves where important actions, events and critical junctures occurred that characterized a change process. For instance, labour market regions cover sites of employment as well as residence. If the research question relates to job creation (which was the case for ReGrow) a natural focus is to zoom in on those parts of the labour market region where jobs are created or destroyed.

The second concern regarding the spatial unit of analysis is that regions are not closed units in a vacuum, but are open and situated in flows of people, goods and capital (Asheim et al. 2016, Trippel et al. 2018). Key events in one region can well have their antecedents elsewhere, in the form of sources of ideas, networks or experiences. In the ReGrow project, we found ourselves chasing what we referred to as ‘patient zero’ in Olofström-Karlshamn; the original source of ideas or the first time people met. It became clear that the construction and launch of Netport in Karlshamn – a triple helix organization combining a university campus with the physical spaces

suitable for small firms in the emerging IT industry in the region – was a direct outcome of events unfolding a decade earlier in the small nearby town of Svängsta. Here, a group of like-minded individuals turned an industrial building left empty by the bankrupt typewriter company Halda into a space suitable for 20 small- and medium sized firms in new fields of logistics, IT and services. Netport in Karlshamn in 1999 was strongly shaped by the ideas, experience and social networks that emerged from the events in Svängsta in 1993. In other words, when studying change agency, we needed to ask ourselves also ‘Where are the origins of events located’ and ‘Where is the agency located that affects a place?’

This last question raises the third concern when studying change agency in regions: Regions are nested in national and supra-national scales (Gertler 2010, Hassink 2010, Grillitsch 2015). Change agency should be considered multi-scalar, where decisions and events taking place at one scale shapes the opportunities for agency at another scale (Grillitsch and Rekers 2015). Regional development paths are thereby not under the sole influence of regional actors: Whereto should we trace agency? In ReGrow, our Olofström-Karlshamn case was shaped heavily by the job losses at a single factory of Volvo Cars in 2008. Several interviewees were keen to point out that this was not a ‘Volvo crisis’, or even ‘a crisis in the automotive sector’. ‘No’ they said, ‘...it all started with the Lehman brothers’, to which an interviewer responded in ignorant surprise ‘What? They have an office here in Blekinge?’ This episode quickly highlighted the need to identify boundaries for our investigation of change agency. Lehman brothers, which we considered in our analysis part of a key event – the financial crisis affecting regional development in Olofström-Karlshamn – were outside our scope, but some projects at county-level (Region Blekinge) that were directly linked to actions in our labour-market region via people or financial resources, were inside the scope of our investigation.

In order to get the spatial unit right when studying micro-level agency in regional development, we therefore considered which boundaries to draw, how porous these boundaries are to flows of people, ideas and resources from neighbouring regions, and to what extent we can trace agency as multi-scalar.

### Getting the Research Instruments Right

Studying agency implies asking the question who did what, when, where, why, how, with whom and to what consequence. Many of the big ‘what’s’ and ‘when’s’ can be identified through desktop research using local newspaper archives, municipal plans and strategies, regional policy documents and other publications pertaining to regional development. This research strategy is able to generate a timeline of events, which, together with quantitative material on employment by industry, is able to paint a quite detailed picture of regional development trajectories. However, in order to go beyond events and investigate change agency – actions directed towards achieving change – it is necessary to go down to the micro-level and identify specific actions, as well as the actor’s perceptions, intentions, motivations, networks, enablers and obstacles. Semi-structured interviews are commonly used to gather this type of

material, triangulating findings between interview subjects and between interview material and printed sources. When embarking on such a research strategy, one needs to carefully consider the design of the research instrument, the interview guide, as well as how it will be used during the interview. Here we discuss each in turn.

Interview guides, as the name implies, steer the conversation between the researcher and the interviewee. The more detailed this guide is, the more structured is the planned conversation, departing from the point of view of the researcher. In our ReGrow project, we started out with a structured guide to record actions and their associated triggers and aims, as well as the factors enabling and/or constraining individuals' actions such as skills, resources, networks, and so on. However, this made it difficult to let interviewees speak freely where they share their stories, perceptions, motives and intentions. The bulk of our interviews were therefore guided by a series of prompts to force the interviewee to go into details about who they worked with ('who invited you', 'who did you ask and why'), where they got ideas from ('who was the first to suggest this', 'where did you get this idea from, had you seen it somewhere else or done this before in a different context?'), and so on. This part of the interview was therefore quite unstructured, following the memory, emotions and enthusiasm of the interviewee. Although such a semi/un-structured interview placed substantial demands on the researcher to have the background knowledge necessary to situate the actions identified by the interviewee in the regional timeline, this approach generated rich empirical material including unforeseen connections between people, between events and between localities.

We encountered two issues related to using the research instrument that ought to be kept in mind when studying change agency in regional development. The first was the issue of time and memory. Whenever research questions lead one to investigate events in the past, we have to deal with the selective memory of the interviewee, a cleaned version of history, errors and forgetfulness. The first three we tried to avoid by presenting interviewees with a general sketch of the region's events timeline, and by triangulating between documents and interviews and between interviewees. Forgetfulness we sought to overcome by preparing triggers, presenting the interviewee with printed newspaper clippings that include photographs of the time-period in question. The second issue related to using the research instrument was the preparation that was required prior to each interview in order to create the interview setting in which interviewees were willing to take the time to go back to events in the past and to share their personal views, strategies, feelings sometimes. We needed to demonstrate knowledge of the region, knowledge of the timeline of events, knowledge of the interviewee's biography and role in the region, and some awareness of the range of stakeholders that were involved. In other words, there needed to be perceived overlap between the world of the interviewee, and the knowledge base of the researcher. Furthermore, this knowledge base was not static but rather grew during the fieldwork period, and by the end of the case study, we needed to be careful to avoid asking leading questions.

## Getting the Data Collection Right

The quality of the material that one can generate with carefully designed and prepared instruments, rests in large part on the selection of who one speaks with and what about. The challenge when studying change agency in regional development, is that there is an abundance of people, events and actions to investigate, especially when considering the difficulty of identifying the spatial and temporal boundaries of the case discussed in earlier sections. Here we reflect on two aspects of selection procedures during the fieldwork period; selecting interviewees, and selecting the actions related to key events that allow us construct a regional ‘action-timeline’ with the possibility to triangulate between different sources of material.

The first challenge is relatively straightforward and not unique to the investigation of (change) agency in regional development. When selecting interviewees during the ReGrow project, we adopted three complementary strategies, including desktop research, gatekeeper contacts and snowball sampling. The gatekeeper, for instance a member of the funding agency’s local network in the region or a regional representative of the research council, was a tremendously valuable resource, identifying individuals and acting as a reference when we initiated contact with potential interviewees. We verified and supplemented this point of entry with the results from our desktop research. Finally, we relied on snowball sampling to generate new lines of inquiry, new points of view on the same actions, and by the end of the fieldwork period it served to confirm we covered most of the relevant ground when no new names came up. Snowball sampling also prompted us to ask an additional question: ‘Your name has been mentioned a few times during our fieldwork, why do you think people see you as someone relevant for us to speak with about these events?’ This question generated self-reflections from interviewees, revealing their personalities and attitudes that helped to contextualize their actions and their role in the region’s development trajectory.

The second challenge pertains to selecting the relevant ‘actions’ from interviewees’ stories. When studying (change) agency in the ReGrow project, we agreed that the smallest unit of analysis was that of the action undertaken by an individual, or group of individuals, with the intention to achieve change. It is these actions that we wished to categorize into three types of change agency – each with their own triggers and aims, enabling and constraining factors, and impact on the regional development path. The more than 1,500 minutes of interview material collected for each single case study included many potential actions belonging to many different stories. During the fieldwork we experienced episodes of micro-overload, where there were so many stories to keep track of that we risked losing overview of the sea of details. In order to cope with this, we designed and filled out so-called ‘protocols’ immediately following interviews in which we distilled (and translated) interviewees’ stories to a set of actions. This protocol complemented our interview notes and the audio-file, and allowed us to synthesize our material from interviewees, building up an ‘action-timeline’ for the region as a whole. As mentioned earlier, even though actions are the smallest unit of analysis in a study on agency, the analytical effort

needs to be directed towards understanding the patterns how a set of actions and interactions affect the emergence of regional paths. This aims to go beyond a historical, descriptive account to an explanation for why certain paths emerged in the way they did (and why certain thinkable alternative paths did not materialize).

### **Getting the Analysis Right**

Case study research is at times criticized for generating detailed descriptions of a small number of examples, that ultimately fail to contribute to theoretical development. Although there are numerous accounts in defence of case study research (Yin 2003, Flyvbjerg 2006, Eisenhardt and Graebner 2007) that need not be repeated here, it is clear that a challenge must be overcome in terms of lifting the level of abstraction from individual observations up to systematic patterns. Using comparative case studies is one oft-used strategy to disentangle generic features that occur across various case studies from their unique contexts (which we adopted in ReGrow, see section on Research Design above). To enable and empower such a comparative approach however, the individual case studies need to share a common approach, material base and analytical strategy. In this section we consider two tools or sorting mechanisms to achieve a level of abstraction that allows for theory-building, while doing justice to the particularities of individual cases.

During the first analysis phase, the first task is to extract and sort data from the interview material. Coding the material, whether this comes in the form of detailed notes or a full interview transcript, allows us to re-organize individual accounts into a consistent format that allows for aggregation and comparison. In our case of the ReGrow project, many of the coding categories were theoretically informed (e.g. type of agency, trigger, enabling and constraining factors), with additional themes emerging bottom-up from single cases or during the comparative analysis (e.g. time perspectives). Despite our use of semi- or un-structured interviews to generate the material, our common codebook ensured our individual interviews and case studies yielded comparable data and narratives. This standardized process of sensemaking thereby allows us to engage in theoretical work, rather than remain on the level of description and illustration.

The second phase of analysis is comprised of case comparisons. Following our research design, our cases in the ReGrow project were selected to allow for comparison on various dimensions, for example on specific sectors (manufacturing, mining), industry structure (dominated by large firms) or geography (cross-border, extreme North). In order to make use of such a design, where features of one case provide a window into another, comparison must take an integrated form during the analysis stage and cannot be left as an add-on at the end of the project. To this end, we allocated considerable resources to support continual interaction between the case study research teams – including regular meetings via online platforms and in-person, but also the exchange of detailed case reports. Such systematic reporting provided a solid knowledge base for thematic discussions, allowing us to sort between generic and context-specific patterns, and unique features of individual cases. During these

(in-person) discussions, we were able to identify additional themes bottom-up and contributing to theory-building.

## CHALLENGES AND POSSIBLE SOLUTIONS IN A NUTSHELL

While theoretically appealing and increasingly used in regional development studies, the concept of agency and its relation to structure is theoretically and empirically challenging. With this book chapter, we aim to share the challenges we faced in a systematic study of agency in a comparative case-study research design. We have identified seven key challenges, which we summarize in Table 17.1, providing a short description and possible solution.

Our studies on micro-level processes of regional development and in consequence agency have proved challenging but also fascinating due to the richness of stories and explanations that we could collect. The challenges we summarize above are most likely not complete and largely based on our study in a Scandinavian context. For instance, the Scandinavian countries are high-trust societies, in which we found interviewees to be accessible and to talk in a relatively unconstrained way about their own perceptions and stories. The more sensitive the research topic becomes and the lower the level of trust, interview data may become increasingly misleading and challenging to interpret, making higher demands on triangulation of sources. Notwithstanding this limitation, we do believe that the presented synthesis of challenges we encountered in multiple case studies provides a comprehensive picture about the struggles researchers will encounter in studies on agency and should consciously reflect upon in their research strategy.

## CONCLUSION

This chapter adds to the literature on regional development by discussing the methodological challenges when aiming to systematically connect agency with structure. Drawing on our experiences from constructing a conceptual framework and developing a rigorous methodology towards these ends, we focused on those issues and challenges that, in our understanding, call for additional attention in any empirical study operating at the crossroads of agency and structures in the context of regional development.

At its best, the conceptual framework we propose (see also Grillitsch and Sotarauta 2020), being targeted at the concepts of trinity of change agency and opportunity space may serve future studies on regional development as a nexus of agency and structure, and thus add additional analytical power needed for theory building. Of course, as demonstrated in this chapter, the conceptual framework works only to the extent that methodological choices support it.



**Table 17.1** *Challenges and possible solutions in studies of agency in regional development*

Challenge	Description	Possible Solution
<i>Ontology</i>	Due to the very general character of the notion of agency, it is necessary to define what agency represents in a given research context.	The focus on human agency that is directed towards or results in a change of regional trajectories has turned out to be a useful entry point in our case studies.
<i>Research design</i>	Agency and structure are intrinsically related, making it difficult to disentangle how agency is affected by or is affecting structure.	The identification of cases that deviate from expectations based on regional structural preconditions and common development stories has helped us to identify agentic processes and non-regional factors affecting regional development.
<i>Time period</i>	Changes are often creeping and/or less iconoclastic than they may appear on the surface. Antecedents to a change process can potentially be traced back very far in history.	The concepts of critical junctures, key events and main phases have been important for us to delineate the time period of investigation.
<i>Spatial unit</i>	Messy and porous boundaries between various levels of administrative and functional regions, and multi-scalar linkages.	Starting with functional units, we increasingly – during the analysis – sharpened our focus to the locations and scales that mattered most for understanding agency in regional development processes.
<i>Instruments</i>	In understanding the perceptions of, motives and intentions behind and consequences of actions, interview data play a key role but are prone to problems due to selective memory, a cleaned version of history, errors and forgetfulness.	We found that relatively open interviews provided the richest stories about agency. In line with this, we designed the interview guide to include prompts about the details concerning agency (who, when, where, how, with whom, to what consequence, etc.). Interviews were used not to understand what happened (we used secondary data for that) but rather why it happened the way it did.
<i>Data collection</i>	The selection of interviewees and of actions relevant for regional change processes from interviewees' stories.	We used three strategies for selecting interviewees: desktop research, gatekeeper contacts and snowball sampling. The selection of relevant actions relied on a clear ontology provided by the TCA. We used interview protocols, audio-files and interview notes, systematically and promptly synthesising the material from the interviews.
<i>Analysis</i>	Moving from detailed, descriptive accounts to theory-building and comparative analysis.	Comparative analysis was used to a large extent. Theoretically informed coding combined with emerging codes from the empirical material allowed comparability. We engaged in regular interactions across the research team and shared detailed case reports as the basis for comparative analysis.

Our approach differs from many other studies, which focus either only on structures or only on agency, or work from structures to agency or vice versa. We emphasise the importance of connecting them both conceptually and methodologically. We acknowledge that the relationship between structure and agency is a long-term challenge in many fields of enquiry, but we find it important to make a continuous effort to tackle with challenges embedded in these efforts.

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## APPENDIX 1: REGROW PROJECT DESCRIPTION

### Regional Growth Against all Odds (ReGrow)

The *overarching aim* of the proposed project is to advance the understanding of determinants of regional economic growth by answering the following overarching research question:

*Why do some regions grow more (or less) than others with similar structural preconditions?*

Most contemporary explanations of regional economic growth rest upon structural preconditions such as the regional industry composition, physical and human capital endowments, infrastructure, and so on. Yet, after taking account of structural preconditions a large share of regional growth differences remains unexplained. One reason for the growing residuals is that the relationship between structural preconditions and growth depends on regional and temporal contexts. Also, quantitative regional growth models have a limited capacity to address the role of agency and institutional frameworks.

The empirical strategy integrates systematically quantitative analyses with in-depth case studies. The quantitative analysis disentangles general (structural) and contextual (region-specific) components of regional growth. Case studies unveil causes of regional growth beyond structural explanations. The novelty lies in systematic identification of cases, that is, regions that in certain time periods grow more (or less) than others with similar structural preconditions. With insights from case studies, we develop a context-sensitive regional growth model that takes account of regional heterogeneity and time dynamics.

Departing from these shortcomings, the *specific objectives* of the project are:

1. To *calculate* the effect of structural factors on regional growth;
2. To *identify* regions that in certain periods of time show exceptional regional growth;
3. To *explain* exceptional high or low growth in certain regions and time periods by focusing on the role of actors, networks, and institutions at multiple spatial scales (regional, national, global);
4. To *develop* a context-sensitive model of regional economic growth that accounts explicitly for the regional heterogeneity and time dynamics.

Integrating quantitative and qualitative methods in a unique way, the project sets up a framework for studying regional growth systematically and cumulatively. This framework is ambitious and goes beyond existing research. The project covers in total 12 regions in Finland, Norway and Sweden.

While being conducted with scientific excellence, the ultimate goal of this project is to provide relevant and useful knowledge to policy-makers concerned with economic growth in different types of regions. Moving beyond structural preconditions,

which are largely the result of historic processes and therefore given, the project provides insights into the regional processes that turn structural preconditions into economic growth.