Viewpoint: Dealing with trade-offs in comparative urban studies

Abstract
Comparative urban studies (CUS) are a widespread applied research approach across various disciplines. The increasing importance that has recently been given to this research method goes hand in hand with the lack of attention paid to various methodological trade-offs surrounding CUS. These trade-offs are a result of the two contrasting poles that CUS tries to pay attention to: the universal one that applies to all cities and the specific one that applies to one city at a defined time and location.

This viewpoint seeks to uncover these trade-offs, discuss strategies about how to deal with them and explore the corresponding consequences in order to support approaches to a) critically reflect on the consequences of methodological decisions; and b) incorporate procedures which might help to resolve some of these difficulties and limitations. The arguments presented here help to sensitise researchers in their applied and theoretical work for the potential opportunities of CUS. We hope to foster the debate about CUS and contribute to the development of robust and methodically precise CUS which balance the intricate coalition between theoretical concepts and the empirical reality.

Keywords: Comparative urban studies, trade-offs, methodological strategies, research design, conceptual framework

1. Comparative urban studies – an introduction

Comparative urban studies (CUS) are a widespread applied research approach across various disciplines. The increasing importance that has been given to this research method goes hand in hand with the lack of attention paid to various methodological trade-offs surrounding CUS (Azarian, 2011; Kantor and Savitch, 2005; Pierre, 2005). This viewpoint seeks to uncover these trade-offs, discuss strategies about how to deal with them and explore the resulting consequences. The arguments presented here help to sensitise researchers in their applied and theoretical work for the potential opportunities of CUS.

The uneven impacts of global processes on cities and the tremendous diversity of empirical phenomena in cities have stimulated an interest in both studying urban questions and questioning urban comparisons (Scott and Storper, 2014). The perspective of CUS has increasingly widened to encompass the global South and has moved away from the dominant focus on a few Western Cities as the blueprints for all comparisons (Robinson, 2011; Peck, 2015). The call for a comprehensive approach that emphasizes the relationships between different contexts and cases has become increasingly pronounced (McMichael, 1990; Robinson, 2011) together with the call for a strengthened cosmopolitan comparative design (Robinson, 2002; 2011). Hence, attention is now being paid more to approaches such as relational comparisons (Ward, 2010) or comparative gestures (Bernt et al., 2014; Robinson, 2016). Cities need to be understood as entities in all their complexity and as social-spatial constructs of networks spanning spatial scales. In this assemblage (Robinson, 2006), it is difficult to identify the city from wider processes, although it is territorialized, depending

on different and unbounded networks and activities (Ward, 2010). However, we label the "meso-level" (Brenner, 2004) on which processes and patterns form relations with several cities 'context' (Pierre, 2005; Scott and Stroper, 2014) in line with the context of scale, widely used in multi-level governance analysis (Ward 2010). In doing so, we do not suggest a strict distinction between the city and its surrounding environment. But as CUS force us to explicate the subject of comparison between cities (Nijman, 2007), we use 'context' as a construct to analytically unravel the phenomena that is compared in cities, and their relational placing to a higher respective hierarchical level. For instance, social, economic and cultural flows to cities might be rooted in a certain policy or a system on a global, national or regional scale (Massey, 2005; Sellers, 2005; Robinson, 2016; Denters and Mossberger, 2006).

CUS is an approach which allows a deeper understanding of cities by the exploring similarities and differences of two or more cases in order to contribute to an inductive discovery of new hypotheses as well as for testing hypotheses (Azarian, 2011; Collier 1993). CUS have long been the subject of the theoretical and methodological debate (Pickvance, 1986; Kantor and Savitch, 2005; McFarlane, 2010) varying considerably in their objective, design and the methodology used (ILS, 2018). Among the various strategies for comparisons that are suggested in the literature, four have been widely debated (after Tilly, 1984; see also Pickvance, 2005; Walton, 1990; Brenner, 2001; Robinson, 2011). First, `individualization´ captures the local specific features of one or more cities that represent examples of a particular phenomenon using hypotheses about causal processes (Pickvance, 2005). Second, `universalization´ seeks to understand common rules or commonalities, assuming that each manifestation of a phenomenon follows the same rules in a sample of cities (Robinson, 2011). Third, `variation-finding´ attempts to determine the differences, similarities or the intensity of a particular phenomenon between cases that share characteristics of a particular phenomenon in the same context (Denters und Mossberger, 2006). Fourth, `encompassing´ explains the phenomena as functions of the different relationships to a larger systemic context such as capitalism or globalization, which have the same effect everywhere (Robinson, 2011).

While many CUS in applied research illustrate "why something is being compared with something else, in what respect and with which aim" (Kocka, 1996:197-8), less attention is paid to the merits, demerits and trade-offs of particular conceptual decisions. These trade-offs are a result of the two contrasting poles that CUS tries to pay attention to: the universal one that applies to all cities and the specific one that applies to one city at a time and location (Sjoberg, 1955; Nijman, 2007). Phenomena emerging in cities are a product of both specific and universal factors − of cultural or demographic factors embedded in political, institutional or economical systems (de Vaus, 2008). On the one hand, cities are specific in terms of a place or characteristic features. These features are not necessarily local in nature. On the other hand, they are the product of relationships that span multiple scales (Robinson, 2006). These relationships, in turn, can apply to several cities and can therefore be said to be universal. However, the result of these relationships can vary tremendously. For instance, a shrinking city's population loss, commonly used as the central indicator, is driven by relationships to manifold socio-economic processes on the regional or national scale. The outcome is the way in which these relationships driving population loss can foster housing vacancies in a particular set of

cities while other shrinking cities remain unaffected by vacancies. CUS seeks to find a balance between specific dynamics and outcomes and the "broader meso-level transformations" (Brenner, 2004), a balance between reducing complexity and uncovering relations, and allowing for contextual richness (Pierre 2005), between incommensurability and universalism (Robinson, 2006), in short: between the specific aspect and the universal one (Grimshaw, 1973). The way in which CUS position themselves between these two poles always means that different trade-offs have to be taken into account. An awareness of these trade-offs and a reflection of the corresponding merits and demerits contribute to the robustness of the CUS' conceptual framework in which the results are then finally interpreted (Kantor and Savitch, 2005; Pierre, 2005). This is necessary as many studies that have made great progress to capture the complexity of urban processes by using explanatory models lack a theoretical underpinning, whereas theoretical discussions on CUS often disregard the empirical reality (Nijmann, 2007; Ward, 2008; Beauregard, 2012). In consequence and in spite of the broad and inter-disciplinary usage, CUS are sometimes used without due care and their results are received without question (Azarian, 2011).

Against this background, this viewpoint asks which trade-offs are involved when a CUS is designed and what are the methodological opportunities to deal with them? Therefore, the aim of this paper is:

1) to discuss in detail three trade-offs which are of primary concern,
2) to explore some selected strategies to deal with these trade-offs,
3) to demonstrate some implications and discuss the benefits of the interrelation of these strategies.

The paper does not intend to belittle or discredit the validity and meaning of other approaches. Rather, the overall ambition is to sharpen the view of trade-offs and the uncertainties that come with them and emerge as a consequence of the complex relationships between CUS, theory and reality that will be discussed in section 2. Section 3 explores the benefits and shortcomings of two strategies for each trade-off, whereas the final section 4 outlines the arguments for developing a systematic understanding of trade-offs. This viewpoint thus supports approaches a) to critically reflect on the consequences of methodological decisions; and b) to incorporate procedures which might help to resolve some of these difficulties and limitations. We hope to foster the debate about CUS and to contribute to the development of robust and methodically precise CUS, which balance the intricate coalition between theoretical concepts and the empirical reality. The arguments have basically been drawn from the post-colonial literature on CUS and combined with the research experience from those CUS projects that the authors have been involved in over the last 20 years.

2. **Trade-offs in CUS**

As with any scientific comparison, CUS is embedded into a triangle together with the objective that is under investigation ("the reality") and the theoretical explanation of this objective ("the theory", Figure 1).

First, CUS can be used for testing hypotheses against reality (Azarian, 2011). Thereby, a CUS is in most cases challenged by the question of selecting a specified number of cases from reality based on a set of criteria, which can then be described by a set of variables. The criteria that are used for selecting cases (in contrast to variables used to perform the analysis) can be quantitative (such as thresholds) or qualitative (such as expert knowledge) in nature. They can refer to the city itself and to the context. For instance, cities can be selected if they are embedded in a specific political, demographic or political context. Usually, a CUS seeks to increase the number of criteria in order to cover more processes; and seeks to increase the number of cases in order to cover a higher variability and possible explanations. Such an operationalization determines the relation between the comparison and reality and accelerates in the ***analysis trade-off:*** the more criteria that are applied, the lower the number of cases that can be considered, and vice versa (Figure 2).

Second, CUS contribute to an inductive discovery of new hypothesis and theory-building (Figure 1). In order to synthesize the knowledge from a CUS, explanations of commonalities and mechanisms of selected cases are detected and conceptualized against the background of a comparative horizon (Nohl, 2013). This horizon can refer to the differences between cases and the differences between cases and context (Sjoberg, 1955). The structures or processes of a city's context can have an impact on the patterns and trends of cities (Le Gales, 2002; Pickvance, 2005). Consequently, the context contributes considerably to understanding processes in cities themselves, even if it can only explain a particular part or fraction of a local phenomenon (Kantor and Savitch, 2005). Thus, local and contextual explanations need to be considered to synthesize knowledge. As processes operate on different spatial scales, resulting in multiple relations (Pickvance, 2005), CUS try to reduce complexity by generalization against the comparative horizon of the contextual scale, while at the same time reflecting local specifics (Pierre, 2005). With this relationship between comparison and the synthesis of knowledge for theory, a ***synthesis trade-off*** emerges: the greater the value that is given to local explanations, the lower the value for contextual explanation and vice versa (Figure 2).

Third, CUS are challenged by the need to develop far reaching, useful and accurate descriptions when applied to other contexts (Kantor and Savitch 2005). Figure 1 reflects this relationship between theory and reality for which the synthesized knowledge used for theory building is transferred to a selected set of cities in other contexts e.g. regions or countries. It should never be assumed that explanations which hold for one context will automatically hold for others. Thus, a transferability of theories and concepts is needed in order to fully understand the variety of explanations across similar and different contexts (Grimshaw, 1973; Sjoberg, 1955). However, most concepts and theories have been developed within a pre-defined context, thus limiting their transferability to other contexts (Nijman, 2007; Ward, 2008). Robinson (2005; 2011), for instance, criticizes the transferability of theories based on a limited sample of cities from the global North to the global South. Consequently, transferability requires a certain reduction in the explanation power for the phenomena under investigation in order to construct "useful empirical taxonomies" (Scott and

Stroper, 2014: 11). However, the more general and abstract a concept or a theory is, the more they will be subjected to different interpretations. As a result, the ***description trade-off*** can be described as follows: the higher the transferability, the lower the explanation power of a theory and vice versa (Figure 2).

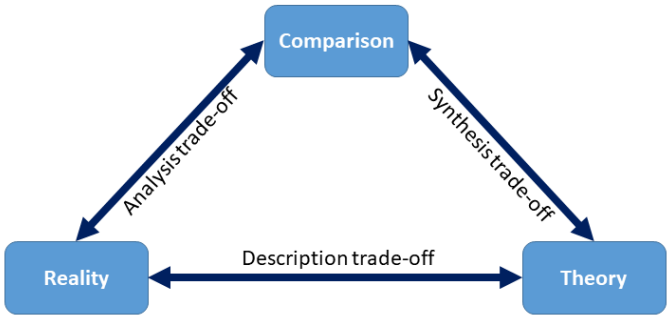

Figure 1: Three trade-offs in CUS between reality, comparison and theory.

3. Strategies for dealing with trade-offs in CUS and their consequences

Based on the three trade-offs this section reflects on strategies for dealing with trade-offs and discusses their implications.

Analysis trade-off

The analysis trade-off can be balanced by two methodological strategies, which determine the way in which cities are selected within CUS, namely − sampling and standardization (Sjoberg, 1955), including the relation between sample size and sample structure (Kantor and Savitch, 2005).

Sampling usually aims to increase the number of cases within a given number of criteria in order to show a certain variation within a particular phenomenon (Figure 2). Controlling this variation helps to reveal explanations. Practically, this is done by expanding the available data: the more data that is available, the greater the number of cases that can be considered.

However, with an increasing number of cases, the number of contexts embedded within the cases also increase. This in turn means that more diverse contextual explanations have to be considered. For instance, housing market processes in a post-socialist context are very different from neoliberal ones. In terms of data, it is imperative to carefully check for comparability. Although the same information is being compared there might be different methodologies behind it that produces different results (Kantor and Savitch, 2005). For example, unemployment numbers in different countries might refer to different groups and thus show a systematic bias. The question of comparability is even more relevant when more data are considered and the scale for comparison is

smaller e.g. on the municipality scale. Moreover, comparability is different from similarity as criteria and variables can be similar but are in fact not comparable.

If comparability is guaranteed, then the degree of ***standardization*** can be varied in terms of what defines the extent to which variables are kept similar or contrasting – or any combination of these. In particular, the comparison of contrasting cases provides additional insights beyond the limits of comparisons of similar cases (Denters and Mossberger, 2006; Robinson, 2011) as the same phenomena can have different reasons. This contrasting lens can refer to cases such as the comparison between shrinking and growing cities, or to the context, such as the juxtaposition of re-urbanization processes to neoliberal or welfare state contexts (Siedentop, 2015).

However, the increasing incorporation of contrasting cases or contexts requires some methodological control (Robinson, 2011). The degree of standardization between local and contextual criteria should not be varied in the same way: the higher the number of contrasting criteria for cities, the more similarities the corresponding context should show and vice versa. This means that certain comparable and relatively stable categories need to be implemented (Sjoberg, 1955) e.g. in terms of scale, operationalization or the relationship between local and contextual explanations. In other words, a certain degree of standardization must be controlled to enable transferability, embedding and validation. Otherwise, it would become too complicated to systematically explore the differences between cases ranging from local to contextual explanations for their relations.

For example, Wolff and Wiechmann (2017) tested a heuristic model of shrinking cities using sampling, standardization and isolating strategies (see next section). Following a variation-finding comparative approach, this research analysed population trajectories of more than 7,000 cities in Europe framed by a strong conceptualization of shrinking cities (Wolff, 2018). The selection of the population as a central indicator was in line with the heuristic used and emerged as a consequence of the incomparability of other local socio-demographic data. As the goal was not to uncover patterns or processes and additional explanations but to detect the variation in shrinking processes in Europe beyond national specifics (Booth, 2015), the sampling was intended to increase the number of cases. Standardization was used in such a way to enable local units in different nations to be compared as cities, allowing for the richness of the actual trajectory and the national context. As a result, five types of shrinking cities were differentiated, which confirm the heuristic used but also highlighted deviations from it (Wolff, 2018).

Synthesis trade-off

CUS are constantly challenged by the task of reducing the complexity between local and contextual explanations to unravel processes that can be done by isolated target variables and functional embedding (Pickvance, 1986).

Isolating target variables enables processes to be investigated across different contexts. This is done by concentrating on a well-defined small number of dependent variables or a combination of key variables (Collier, 1993). Thereby, it is possible to investigate the variation of target variables across different spatial scales which, most often, represent spatial contexts such as regions or nations. This is one strategy that is applied among variation-finding approaches. However, the more strict that the target variables are isolated e.g. by focussing on one variable for which data is available and comparable, the less opportunities a CUS has for uncovering multiple processes and relationships. Moreover, this strategy requires the phenomenon under investigation to be sufficiently conceptualized and operationalized in order to control for the dependent variable (Collier, 1993; Kantor and Savitch, 2005). For instance, the use of population data in shrinking cities research does not reflect all aspects of these multi-facetted phenomena, and yet it is commonly used because it is conceptually well-established within the cause-process-effect chain of shrinkage. However, local population loss can be driven by various factors operating on and across different spatial scales such as economic decisions, labour market changes, or failures of national planning. In turn, the population decline of a city can contribute to the shrinkage of the whole region or nation, having an impact on its tax policy and financial allocations at the regional or national scale (Pumain et al., 2006). Isolating variables allows the same hypothesis to be tested on different scales, but has its limitations when it comes to testing relationships across different scales.

Consequently, the design of a CUS needs to conceptualize both the interaction of processes on different scales and the embedded understanding of local characteristics and processes (Sellers, 2005). Therefore, a phenomenon or process under investigation is assigned to its function within the multiple scalar relations using ***functional embedding***. Such an embedded understanding of local processes focusing on their functions allows the associated scalar interdependencies to be controlled, which would otherwise substantially increase the complexity of the investigated phenomenon. A second benefit is that this strategy does not require a pre-defined hierarchy to investigate the role of interconnections between spatial scales, which would certainly hide several aspects of inter-scalar functions (Robinson, 2011). In this vein, functional embedding is similar to encompassing comparisons.

One example is the application of the concept of urban governance modes, originally developed by Di Gaetano and Strom (2003) to post-socialist shrinking cities (Rink et al., 2009). Although the concept took various political and economic situations into account, it became apparent that these types could not be clearly and directly assigned to the empirical realities of post-socialist cases, preventing sufficient interpretation (Rink et al., 2011). This was because the governance modes were developed in a different context using a formal embedding that compared the types of interaction of local actors and institutions that used to perform the same functions (Denters and Rose, 2005). When applied to other contexts, this model would specifically show up these actors and institutions, assuming they play the same role within the local governance setting, hiding the diversity of formal and non-formal urban actors or hybrid forms of governance (Ward, 2008). Instead of comparing "fixed" institutions, a functional embedding was used, which focuses on similar functions and types of urban decision making, whereby the actors involved in decision making within the cities are

assigned to the function or process in a second step (Cox, 1995). The different forms of cooperation and communication between actors e.g. from the economy, civil society, business representatives, community groups, local initiatives, housing associations etc. participating in local governance processes have been described in an open and less-deterministic policy cycle together with their relationships to higher levels of decision-making. Thus, the local modalities and processes in the post-socialist cities could be described and compared in terms that are specific to them and their contexts (Couch et al., 2011; Rink et al., 2011).

Description trade-off

To balance the trade-off between the transferability of a theory and to increase its explanatory power, a CUS can make use of developing heuristics and theorizing-back strategies.

Heuristics can be used as an explanatory framework which allows concepts and synthesized knowledge to be carefully transferred to other contexts (Pierre, 2005). Heuristics should not intend to establish causal generalizations by assuming common rules in any city or context under investigation. Instead of developing rigorous concepts, they reflect complexity, by defining the relations between variables (Haase et al., 2016; Abbott, 2004; Beauregard, 2012). The transfer of explanations using heuristics does not intend to test the relationship between variables in other contexts or proof causality. Rather, heuristics seek to understand whether dynamics plausibly reflect the same patterns, processes and relations suggested by the hypothesis within the heuristic (Collier, 1993). Thereby, the range of factors and mitigating processes are detected and conceptualized to factor chains. This process-tracing allows conclusions to be drawn as to how effectively the heuristic and their conceptual insights can be applied to other cities and contexts without losing any of its explanatory power (Booth, 2015).

A heuristic should employ processes and their relation in such a way that a hypothesis can be tested using rigorous conceptualization and robust operationalization that relates theory to the empirical reality (Sjoberg, 1955). This goes along with a strong focus on the studied phenomenon and an emphasis on its causal powers and liabilities (Ward, 2010). This reduction of complexity is a somehow necessary consequence of developing heuristics as the diverse explanations for a phenomenon are investigated. This, however, requires a strong link to theoretical concepts and an *a priori* theoretical abstraction on the one hand (Scott and Stroper, 2014), as well as a constant reflection of empirical findings, on the other (Sjoberg, 1955).

An example of this is a heuristic model of shrinking processes in Europe (Haase et al., 2016) which is the result of an embedded comparison of 10 cities in different national, economic and social contexts. This analysis, based on a literature analysis and expert knowledge, has been combined with theoretical concepts and translated into a heuristic explanatory framework that describes urban shrinkage as a multi-dimensional phenomenon. The model brings together the causes of shrinkage in cities with population loss as the main indicator, and illustrates local consequences such as the underutilization of infrastructure and aging. It also captures possible mutual dependencies or feedback effects and helps explain them as part of a dynamic development. Thus, the consequences

show interactions with further local development as well as with politics and governance, which in turn react to shrinkage and its consequences.

It is crucial that the conceptual design of CUS is as open as possible in order to meet the needs of a highly diverse spectrum of urban realities and futures (as enabled by heuristics), in order to obtain valuable insights beyond their own conceptual limits. Therefore, a ***theorizing-back*** is required which contrasts the processes or patterns detected in other contexts with the theoretical concept applied (Ward, 2008). Theorizing-back originates from the critique that concepts and theories used for CUS have been developed within Western-dominated contexts and can only be applied to other contexts in a limited way (Robinson, 2005; 2011). Cities can be seen as a laboratory for the application of theories and, at the same time, they represent a source for hypothesis and theory (Robinson, 2011). Using this dual role of cities for an iterative process within CUS helps existing concepts to be further developed, adapted and theorized (Beauregard, 2012) and simultaneously re-examines the understanding of fundamental processes in cities. In this vein, a steady transition between induction (from the particular to the general concept) and deduction (review of the developed concepts on new data) can be applied following ideas of the Grounded Theory.

Theorizing-back thus has the potential to uncover limits of the respective theory and shows where theories and concepts fall short and require additional explanations from other concepts. However, in line with the critique from Robinson (2011), it is not easy to reflect on the applied theory nor to consider theoretical or conceptual adaptation that is sensitive to the objective and context under investigation. Thus, there is a certain danger that, instead of theorizing-back, the results are interpreted in such a way that they match the concept applied. However, cities may be similar in terms of all of the independent factors, while differing significantly in other factors, challenging any conclusion about the relation or even causality between those factors (Steinführer, 2004; Pierre, 2005). Consequently, both similar and different explanations for urban processes need to be reflected instead of assuming universal cause-effect-chains (Pickvance, 1986). By detecting deviations from the theory, it is possible to highlight the extent to which other processes play a role in the phenomenon. Hence, it is possible to detect “new and hitherto unsuspected insights that other contexts may provide about the logic and inner workings, dynamics and patterns of cities beyond that what is currently understood in these matters” (Scott and Stroper, 2014: 12).

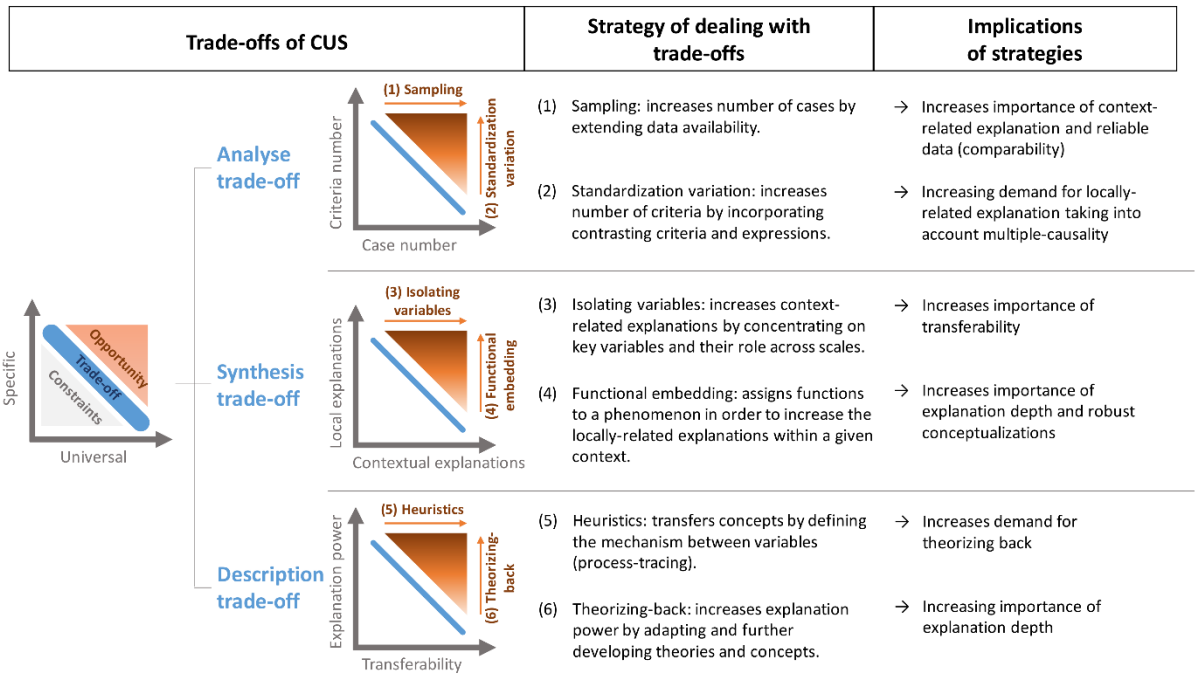

Figure 2: Summary of trade-offs, strategies for dealing with them and their implications.

4. Instead of conclusion: An invitation to debate trade-offs in CUS

The twofold ambition in CUS of theoretical construction and methodological conceptualization reflects the tension between theory and observation (Scott and Stroper, 2014). This viewpoint has translated this tension into the relationship between universal and specific knowledge where the three trade-offs of CUS emerge. It was shown that CUS are challenged by limited access to and comparability with data, a need to incorporate local explanations and the difficult transferability of concepts to other contexts (ILS, 2018). Instead of providing conclusions, this viewpoint should be an invitation to systematically discuss in more detail the nexus between theoretical conceptualization and empirical research in CUS focusing on three key aspects.

Reflecting trade-offs in CUS

In light of the plurality of comparative approaches (Nijman, 2007) scholars need to realize that each CUS involves certain trade-offs as a result of manifold decisions in operationalising theoretical concepts into applicable methods. This means that no CUS can ever be comprehensive and that their results should not be over-interpreted (Kantor and Savitch 2005). However, this also means that each CUS has its merits that are relative to the research question developed, requiring a critical reflection of the trade-offs within a conceptual framework. This helps to demonstrate the analytical robustness of a CUS and to discuss the results sensitive to trade-offs (Kantor and Savitch, 2005). This is also necessary because a strategy applied to balance a trade-off also has an impact on other trade-offs. For instance, the way in which the analysis trade-off is balanced has an impact on the synthesis

trade-off, as with an increasing number of cases the need for context-related explanations increases, while with an increasing number of contrasting variables more diverse local explanations need to be considered. Consequently, an un-reflected transfer of the corresponding concepts to other contexts (description trade-off) usually cannot exemplify the full explanatory power and thus only partially helps to explain the way in which cities really work. Thus, the way in which an analysis is performed and how results are synthesized affects the suitability to theorize-back complex aspects of urban development for theory building (Pierre, 2005; Ward, 2008).

The integration of various strategies into a CUS requires a robust conceptual framework (Walton, 1975) which accurately addresses the approach, its application and its trade-offs, methodological challenges and shortcomings as well as highlighting opportunities to re-question these analytical issues. Moreover, this framework must not only enable a reproduction but also an iterative combination, while also attempting to constantly fine-tune the trade-offs involved as well as minimizing their pitfalls. By addressing these preconditions, it enables us to re-question the robustness of CUS in a transnational and translocal manner (Bourne, 2008; ILS, 2018).

Linking strategies for developing robust CUS

Strategies and techniques alone cannot resolve the trade-offs (Sjoberg 1955). A methodically less rigorous or more flexible understanding for performing CUS is needed ("comparative gesture," e.g. Bernt et al., 2014; Robinson, 2016) which allows for an intelligent, experimental and iterative combination of strategies in order to find a good balance between reducing complexity, uncovering causal relations and allowing for contextual richness. Based on the strategies discussed, the following part exemplifies the benefits of their linkages.

Within a given context in which a phenomenon is observed, sampling is usually the first step of a CUS. Thereby, a quantitative entry of a comparison forces scholars to “explicitly specify fuzzy concepts in a rigorous operationalizable manner” (Smith 1991). Following a variation-finding attempt, sampling is accompanied by the more or less strict isolation of target variables in order to detect diverse processes, structures and explanations within a sample of cities. The combination of sampling and isolating strategies is mostly based on the most-similar approaches which have the power to display the variation of a phenomenon but have limited explanation power of the underlying processes, patterns and relations. In order to allow this approach to reach its full potential, a reduced standardization of variables and a greater incorporation of contrasting local and contextual aspects are promising to avoid average effects (Nijman, 2007). The benefit of combining the variation-detection with the analysis of contrasting cases and contexts is that new comparative opportunities are provided that strongly focus on the dissimilarity of cases. The deductive consideration of both similar and different casual explanations - in other words: hypotheses are disproved, not proved – can thus be used in a way that both similar and contrasting cases raise questions both ways.

A necessary precondition is that a CUS is nested in a robust conceptualization of the phenomenon. This can be performed by a heuristic which has been developed from individualization approaches. Thereby, a heuristic a) serves as a collection of a range of smart hypotheses, which can be used for the selection of cases and thus link operationalization to theory, and b) provide explanations about dependent and independent variables across different cases (Robinson, 2011). Using heuristics would also allow different explanations and concepts to be applied to other contexts. In this vein, the application of a concept via sampling (increasing the number of cases) need to be strongly linked to a functional embedding strategy which considers the diverse role and interaction of variables in different contexts and highlights different kinds of multi-scale relations (Scott and Storper 2014). However, this transferability and the corresponding re-contextualization of explanations provided by the heuristics needs to challenge existing theories. Accordingly, an iteratively adaptation of the heuristics is required taking into account empirical findings which may finally lead to the adaptation of a theory in the sense of theorizing-back (Robinson 2011; Nijman 2007; Denters and Mossberger 2006).

Anchor points to the postcolonial debate

A reflection on the benefits of combining strategies for developing robust CUS is not an approach per se that can be compared with other attempts suggested in the literature (Tilly, 1984; Pickvance, 2005; Ward, 2010; Robinson, 2011). Still, this viewpoint argues in favour of the post-colonial debate on CUS (Robinson, 2005; Ward, 2008; McFarlane, 2010). First, our approach does not assume any given or produced hierarchy of cases, which is a central argument of theorizing-back. Rather, the strategies presented here are most efficient working without any conceptualization of showcases or forerunners and the underlying assumptions that successful measures could be applied to other cases, producing the same results and finally converse development can be expected (Robinson, 2016). Dealing with trade-offs seeks to provide tools for revealing explanations across different contexts and scales under the given limitations on the terms of data availability, analysis comparability and concept transferability.

Second, a systematic understanding of trade-offs does not represent a blueprint for every CUS. Rather, the strategies and a combination of them need to be carefully considered for every comparison – not all strategies are needed to the same extent for every CUS. This is particularly relevant as we strongly argue in favour of increasingly incorporate contrasting comparisons or most-different approaches without assuming a strict a-priori selection of the relevant characteristics in order to uncover processes and their relations beyond law-like explanations (Robinson, 2006).

Third, this approach does not postulate causal relations or generalizations of explanations or comparisons against a universal yardstick (Hart, 2002 cited in Ward 2010) because several patterns and processes would remain undetected (Nijmann, 2007). Therefore, heuristics could serve as a conceptual skeleton, which highlight the various interrelations of a phenomenon, while at the same

time enable heuristics to be constantly adapted into an iterative process between reality, comparison and theory.

Our approach could be used to develop CUS that is open to different methods and self-reflected in a sense that the CUS is constantly re-questioned against the phenomena under investigation and the theory behind them. Using the analogy of crossing a street, we should be prepared to keep looking from left to right – to empirics and theory – before crossing, in order to enter a new context. This viewpoint argues for a "smart coalition" between theoretical aspirations and empirical possibilities in order to best balance the "nature of the epistemic correlation between concepts and indicators" (Beauregard, 2012: 475). Instead of clearly positioning an approach in an ideological corner, a constant dialogue between theoretical scholars and empirical methodologists about trade-offs and synergies in CUS has the benefit of highlighting interlinkages to other concepts and contrasting theories with the empirical and conceptual reality and feasibility. As CUS is an ideal method for this, we ask for a critical reflection of the methods and concepts of past work beyond a pure detection of failure but in favor of understanding CUS as a method for learning about failure. Therefore, it is essential to develop a serious and reflective understanding of the trade-offs inherent in CUS in order to further develop comparative concepts in an appropriate and methodically robust manner.

Funding: This research was carried out as part of the project ENABLE, funded through the 2015–2016 BiodivERsA COFUND call for research proposals, with the national funders The Swedish Research Council for Environment, Agricultural Sciences, and Spatial Planning, Swedish Environmental Protection Agency, German Aeronautics and Space Research Centre, National Science Centre (Poland), The Research Council of Norway and the Spanish Ministry of Economy and Competitiveness.

References

Abbott, A. (2004) Methods of Discovery. W.W. Norton, New York.

Azarian, R. (2011). Potentials and Limitations of Comparative Method in Social Science. International Journal of Humanities and Social Science, Vol. 1 No. 4; April 2011.

Beauregard, R.A. (2012) What Theorists Do. Urban Geography 33.4, 474–487.

Bernt, M., A. Haase, K. Großmann, M. Cocks, C. Couch, C. Cortese and R. Krzysztofik (2014) How Does(n't) Urban Shrinkage Get onto the Agenda? Experiences from Leipzig, Liverpool, Genoa and Bytom. International Journal of Urban and Regional Research 38.5, 1749–1766.

Booth, P. (2015) What Can We Learn From France? Some Reflections on the Methodologies of Cross-National Research. In P. Healy, H. Neil, P. van den Broeck (eds.), The Routledge Handbook of Planning Research Methods, Routledge, New York and London.

Bourne, L. (2008) On Schools of Thought, Comparative Research, and Inclusiveness: A Commentary. Urban Geography 29.2, 177-186.

Brenner, N. (2001) The limits to scale? Methodological reflections on scalar structuration. Progress in Human Geography 15, 525–548.

Brenner, N. (2004) New state spaces: urban governance and the rescaling of statehood. Oxford University Press, Oxford.

Collier, David, (1993). The Comparative Method. In: Ada W. Finifter, ed., POLITICAL SCIENCE: THE STATE OF DISCIPLINE II, American Political Science Association, Washington D.C., https://ssrn.com/abstract=1540884Collier, 1993

Couch, C., M. Cocks, D. Rink, A. Haase, M. Bernt and K. Grossmann (2011) Governance of Shrinkage within a European Context. Comparative analysis of cross-cutting themes (WP5 D11). EU 7FP project Shrink Smart (No. 225193), unpublished typescript, UFZ, Leipzig.

Cox, K.R. (1995) Globalisation, competition and the politics of local economic development. Urban Studies 32, 213–224.

Denters, B. and E. Rose (2005) Comparing local governance – trends and developments. Palgrave Macmillan, Basingstoke.

Denters, B. and K. Mossberger (2006) Building blocks for a methodology for comparative urban political research. Urban Affairs Review 42, 550–571.

Di Gaetano, A. and E. Strom (2003) Comparative urban governance. An integrated approach. Urban Affairs Review 38, 356–395.

Grimshaw, A.D. (1973) Comparative sociology: in what ways different from other sociologies? In M. Armer and A.D. Grimshaw (eds.), Comparative social research: methodological problems and strategies. John Wiley & Sons, London.

Haase, A., M. Bernt, K. Grossmann, V. Mykhnenko and D. Rink (2016) Varieties of shrinkage in European Cities. European Urban and Regional Studies 23.1, 86–102.

ILS (2018) International vergleichende Stadtforschung. Eine Handreichung für die wissenschaftliche Praxis im ILS. ILS – Institut für Landes- und Stadtentwicklungsforschung, Dortmund.

Kantor, P. and H.V. Savitch (2005) How to study comparative urban development politics: a research note. International Journal of Urban and Regional Research 29, 135–151.

Kocka, Jurgen (1996) "The Use of Comparative History" pp. 197-209 in Societies Made up of History: Essays in Historiography, Intellectual History, Professionalizations, Historical Social Theory and Proto-Industrialization edited by Ragnar Björk & Karl Molin, Stockholm.

Le Gales, P. (2002) European cities. Oxford University Press, Oxford.

Massey, D. (2005) For space. Sage, London.

McFarlane, C. (2010) The Comparative City: Knowledge, Learning, Urbanism. International Journal of Urban and Regional Research 34, 725–742.

McMichael, P. (1990) Incorporating comparison within a world-historical perspective: an alternative comparative method. American Sociological Review 55.3, 385–97.

Nijman, J. (2007) Introduction – Comparative Urbanism. Urban Geography 28.1, 1–6.

Nohl AM. (2013) Vergleich und Typenbildung in der qualitativen Forschung. In: Relationale Typenbildung und Mehrebenenvergleich. Qualitative Sozialforschung. Springer VS, Wiesbaden

Peck, J. (2015) Cities Beyond Compare? Regional Studies 49.1, 160–182.

Pickvance, C. (1986) Comparative urban analysis and assumptions about causality. International Journal of Urban and Regional Research 10, 162–184.

Pickvance, C. (2005) The Four Varieties of Comparative Analysis: The Case of Environmental Regulation. Paper for Conference on Small and Large-N Comparative Solutions, University of Sussex, 22.–23. September 2005.

Pierre, J. (2005) Comparative urban governance: uncovering complex causalities. Urban Affairs Review 40, 446–462.

Pumain, D. (2006) Alternative explanations of hierarchical differentiation in urban systems. In D. Pumain (ed.), Hierarchy in natural and social sciences. Methods series, Springer, Dordrecht.

Robinson, J. (2002) Global and world cities: a view from off the map. International Journal of Urban and Regional Research 26.3, 531–54.

Robinson, J. (2005) Urban geography: world cities, or a world of cities. Progress in Human Geography 29, 757–765.

Robinson, J. (2011) Cities in a world of cities: the comparative gesture. International Journal of Urban and Regional Research 35.1, 1–23.

Robinson, J. (2016) Comparative urbanism: New Geographies and Cultures of Theorizing the Urban. International Journal of Urban and Regional Research 40.1, 187–199.

Scott, A. J. and Storper, M. (2015), The Nature of Cities: The Scope and Limits of Urban Theory. Int J Urban Regional, 39: 1-15. doi:10.*1111/1468-2427.12134*

Sellers, J. (2005) Re-placing the nation: an agenda for comparative urban politics. Urban Affairs Review 40, 419–445.

Siedentop, S. (2015) Suburbane Räume unter Anpassungsdruck – ein deutsch-amerikanischer Vergleich. In J. Jessen and F. Roost (eds.), Refitting Suburbia. Erneuerung der Stadt des 20. Jahrhunderts in Deutschland und den USA. Jovis Berlin, Berlin.

Sjoberg, G. (1955). The Comparative Method in the Social Sciences. Philosophy of Science, 22(2), 106-117. Retrieved from http://www.jstor.org/stable/185546

Steinführer, A. (2004) Wohnstandortentscheidungen und städtische Transformation: vergleichende Fallstudien in Ostdeutschland und Tschechien. Stadtforschung Aktuell, Verlag für Sozialwissenschaften, Wiesbaden.

Rink, D., A. Haase, M. Bernt (2009) Specification of working model (WP1). EU 7FP project SHRINK SMART. Governance of Shrinkage within a European Context (No. 225193), research report, UFZ, Leipzig.

Rink, D., A. Haase, K. Grossmann, M. Bernt, C. Couch, M. Cocks, A. Violante, C. Cortese and P. Calza Bini (2011) How shrinkage and local governance are interrelated across urban Europe: a comparative view (WP6 D12). EU 7FP project SHRINK SMART. Governance of Shrinkage within a European Context (No. 225193), research report, UFZ, Leipzig.

Smith, D. A. (1991) Method and theory in comparative urban studies. International Journal of Comparative Sociology, Vol 32, pp. 39 – 58.

Swyngedouw, E. (1997) Neither global nor local: “glocalisation” and the politics of scale. In K.R. Cox (ed.), Spaces of globalization: reasserting the power of the local. Guildford Press, New York.

Tilly, C. (1984) Big Structures, Large Processes, Huge Comparisons. Russell Sage Foundation, New York.

de Vaus, D. (2008) Comparative and cross-national designs. In P. Alasuutari, Bickman, L. and J. Brannen (eds.), The Sage Handbook of Social Research Methods (pp. 249-264) London: Sage.

Walton, J. (1975) Introduction: Problems of Method and Theory in Comparative Urban Studies. Urban Affairs Quarterly, Vol 11, Issue 1, pp. 3 – 12.

Walton, J. (1990) Theoretical methods in comparative urban politics. In J.R. Logan and T. Swanstrom (eds.), Beyond the city limits: urban policy and economic restructuring in comparative perspective. Temple University Press, Philadelphia.

Ward, K. (2008) Comparative urbanisms: past work and future agendas. Imagine Urban Futures Working Paper 5. University of Manchester, Manchester.

Ward, K. (2010) Towards a relational comparative approach to the study of cities. Progress in Human Geography 34.4, 471–487.

Wolff, M. and T. Wiechmann (2017) Urban growth and decline: Europe’s shrinking cities in a comparative perspective 1990-2010. European Urban and Regional Studies 25.2, 122–139.

Wolff, M. (2018) Uneven urban dynamics - The role of urban shrinkage and regrowth in Europe. PhD Thesis, School of Spatial Planning, TU Dortmund University, January 2018. http://dx.doi.org/10.17877/DE290R-19066.