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Neighbors, friends, rivals:  
The role of economic development actors in shaping interregional relationships

by

Clara Turner

A dissertation submitted in partial satisfaction of the

requirements for the degree of

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in

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in the

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of the

University of California, Berkeley

Committee in charge:

Professor Karen Chapple, Chair  
Associate Professor Carolina Reid  
Professor Steven Vogel

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## **Abstract**

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Clara Turner

Doctor of Philosophy in City and Regional Planning

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Professor Karen Chapple, Chair

The presence of an economically stronger neighbor can affect a region's development path in a variety of ways, some positive and some negative. In this dissertation, I investigate how regional economic development actors attempt to leverage the potential advantages and mitigate the potential disadvantages of proximity to a stronger region. This research contributes actor-focused, planning-centered perspectives to an emerging literature that seeks to explain and predict interregional economic relationships. Understanding these relationships, and how actors attempt to shape them, is particularly important given widespread patterns of growing interregional economic divergence that threaten social and political stability.

In the dissertation's introduction, I place the research questions within the context of theoretical and empirical literature on interregional economic relationships, and identify key themes that inform the three chapters' research questions and design. I discuss the dissertation's contributions to the academic understanding of regional economic development paths and to the development of tools that can be used to bridge this research with policy and practice.

All three chapters of the dissertation engage in mixed methods case study based in the Upper Rhine megaregion, which spans three countries and nine economically diverse subnational regions. The Upper Rhine provides the opportunity to study interactions between stronger and weaker neighboring regions, including separating out the effects of national and regional institutional contexts.

The first chapter of the dissertation examines cross-border interregional integration, comparing spatial patterns of functional integration, in the form of commuter flows, with those of organizational integration, indicated by network ties among economic development organizations. I find that the presence of pronounced differentials in wages and cost of living shape both forms of integration, but in different ways. While functional flows are driven by the presence of differentials, organizational networks and network strategy reflects attempts by development actors to capture benefits of complementarity or similarity with their counterparts across international borders. These organizational networks also reflect a broad context of formal and informal institutional integration.

In the second chapter, I compare how economic development actors in two regions attempt to spatially position their region versus a stronger neighbor, and relate their strategic choices to theoretical models of interregional economic relationships. I find that these actors simultaneously attempt to avoid or reduce threats posed by their strong neighbor, and attempt to capitalize on opportunities provided. Drawing from the findings, I also clarify a definition for “spatial positioning” and argue for its relevance as a planning concept.

The third chapter examines how economic development practitioners engage with the concept of place competitiveness in the context of interregional disparities. Findings indicate that competitiveness is an incoherent concept; actors used a range of definitions and operationalizations, some of which were contradictory. While market-based logics dominated discussion of competitiveness, actual strategy and application indicated more diverse approaches to economic development, including significant emphasis on collaboration. I untangle two factors which determine whether development approaches are competitive or collaborative: the scale at which they occur and the scarcity of the resources involved.

In each chapter, I connect theoretical literature and empirical research with potential policy application. I offer typologies or frameworks intended to draw out the underlying mechanisms shaping interregional relationships, and interrogate concepts that actors are expected to implement in economic development practice. To conclude, I suggest future directions for this line of inquiry, and situate the research within the context of current challenges in regional development.

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## Introduction

In this dissertation, I explore the theme of interregional economic relationships and how these relationships are mediated by institutional actors (organizations) engaged in promoting or governing economic development. I particularly explore how regions attempt to shape their relationships to economically stronger neighboring regions – those with greater productivity, high employment, and high rates of in-migration or in-commuting. Theoretical and empirical research suggest various mechanisms through which a strong region might affect its neighbors, presenting both opportunities and threats to their economic development. Yet how, when, and why these mechanisms come into play, and how institutional actors influence them, remains undetermined.

The relationships between stronger and weaker regions are particularly relevant given the present trend of growing interregional economic divergence and its concerning implications for economic, social, and political stability (Rodríguez-Pose 2018, Clarke et al. 2016). A region is likely to be affected by the size and/or growth of a neighbor; whether this effect is positive or negative appears to depend on individual, and probably institutional, contexts (Gagliardi and Percoco 2017; Moretti 2014). This dissertation thus aims to contribute to the broad question of how a region's development is influenced by adjacent regions, and specifically investigates how institutional actors perceive and react to their neighboring regions when creating strategy for their own. By focusing on the perceptions and strategies of economic development actors, the dissertation prioritizes a planning perspective and connects applied experiences to regional economic theory.

The first chapter focuses on networks between regional economic development actors: where they exist, how they develop, and how they engage with interregional and cross-border economic differentials. The second chapter focuses on spatial positioning strategy, examining how these same actors develop strategies that take the influence of neighboring economies into account. I investigate how actors' strategies reflect or depart from theoretical understandings of interregional economic relationships. The third chapter examines the concept of place competitiveness as understood by economic development practitioners.

All three chapters use mixed methods, comparative case studies based in the Upper Rhine megaregion, which consists of twelve subnational regions in three countries. Because the regions of the Upper Rhine are economically diverse, multiple relationships between stronger regions and their neighbors can be examined. Because the Upper Rhine is trinational, the effects of different regional and national institutional contexts can be distinguished and compared.

Research findings broadly conclude that economic differences between neighboring regions shape the relationships between them and the strategies used by economic development organizations. The first chapter observes that cross-border and interregional networks of organizations differ from patterns of functional economic integration, with these differences reflecting the effects of economic differentials in wages and cost of living. The second chapter finds that economic development actors attempt to leverage advantages and/or mitigate threats posed by economically stronger neighboring regions, often simultaneously. The third chapter finds that competitive and collaborative relationships between places are mediated by scale and by the type of resources involved.

In the first section of this introductory chapter, I review key themes in the literature that inform the development of the research questions, and identify the niche in which the dissertation intervenes. The second section discusses the research design and the contributions made by the research, and the third section provides a brief summary of the three subsequent chapters.

## **Themes in literature**

Multiple academic disciplines engage with the question of interregional economic relationships, emphasizing different mechanisms or outcomes as well as different methodological perspectives. Within this broad literature are three core themes that provide a foundation for the research questions of my dissertation.

First, regions have some form of economic effect upon their spatially proximate neighbors' economies. One line of inquiry in economic geography theorizes possible effects of nearby agglomeration upon smaller or medium-sized cities or regions. Individual chapters in this dissertation discuss this research more comprehensively, but the fundamental concept is that both or either positive and negative effects of agglomeration can affect neighboring cities. The concept of 'agglomeration shadows' theorizes that growth in a region near a concentration of firms will be limited by competition effects, and promote divergence between the stronger region and its weaker, shadow region. Some evidence suggests that increased physical connectivity has actually reinforced differentials between regions if the regions are very unequal (Puga 2002).

A contrasting theory is that of "borrowed size," which suggests that small and medium-sized cities can "borrow" the advantages of size from nearby larger cities or from one another, allowing them to compete with larger regions (Meijers and Burger 2015). It also appears that large cities can borrow advantages from nearby smaller cities. Size borrowing can be demonstrated and measured empirically, but its occurrence is inconsistent and its drivers as yet unclear (Meijers et al. 2015; van Oort et al. 2010). A relationship between size borrowing and agglomeration shadow effects – whether they can coexist, whether they interact – has also not been determined. Finally, and most relevant to this dissertation, it is as yet unclear what role institutional contexts or actor agency play in determining which phenomena, if any, occurs.

Second, relationships between regions vary significantly based on the characteristics of the regions involved, including their relative geographic positions, their economic and demographic features, and their position in extraregional systems. Research on peripheral regions and peripherality in economic geography engages with interregional relationships between regions in one geographic or structural location and those far removed. Economically, a fundamental idea is that peripheries – themselves a 'fuzzy concept' – cannot access benefits derived from agglomeration. Politically, peripheries are argued to have less influence on decision-making processes made in 'core' regions which affect the periphery's development (Pugh and Dubois 2021).

Scholars in political science and sociology have examined how regions and nations host different economic functions and how this distribution can determine growth paths for a region. Jacobs's concept of a "supply region," in which a region does not diversify their production but rather relies on a limited export base, describes an unbalanced interregional

relationship which ultimately leads to precarity and stagnation for the supply region (Jacobs 1986). Sassen's work on global cities describes how economic functions center decision-making power in certain megacities (Sassen 1991). Massey's 1979 essay on spatial organizations of labor argued that regional divergence – then in relatively nascent stages – was a product of geographic shifts in the increasingly global production process, not the result of characteristics internal to regions (Massey 1979). Studies of the governance of supply chains have identified that places' roles in value chains dynamically affect the development options available to them (Sturgeon 2003, Gereffi et al. 2005).

These approaches problematize divisions of production, labor, and control, and their implications for a place's ability to economically and politically determine its growth path, as well as power dynamics and power asymmetries between localities and regions in space. A next research step is to examine how local and national institutions affect a region's situation within economic production systems or hierarchies of political economy.

Third, economic relationships between regions are shaped by the organizations and institutions within them. These relationships, as well as the institutions and organizations themselves, are dynamic, mutually reinforcing, and mutually reproducing.

The late 1980s saw a broad move towards the consideration of institutions in the social sciences. The "institutional turn" in regional studies and economic geography drew from institutional economics, Polanyi's anthropological concept of market relations, and Granovetter's concept of embeddedness in economic sociology (Williamson 2000; Granovetter 1985; Polanyi 1944). Scholars argued that regional conditions could foster networks of relationships that engendered trust, shared expectations, and shared strategic behaviors from the firms and industries in the region.

In this perspective, these regional conditions are institutions, defined here per North (1990) as "formal and informal rules, such as regulations, laws, values, norms, and attitudes" which shape relationships among firms and actors in an economy (Scott 2008). Initially, scholars proposed that institutions, and networks between them, enabled regional economies to survive global cost competition in manufacturing (Amin and Thrift 1994; Brenner 2000). They presented case studies of "outlier" industrial regions in Europe that continued to thrive while other industrial regions faltered, attributing their success to regional institutional contexts (Cooke and Morgan 1993; Piore and Sabel 1986).

Interest in the role of institutions in regional economies persisted, even as the idea of using local manufacturing survival as a metric for success became less relevant and less popular in the subsequent decade (Amin 1999; Coulson and Ferrario 2007). Although the less successful manufacturing districts held up as examples began struggling themselves (Bianchi 1998; Boschma and Lambooy 2002), research on knowledge-intensive regional economic development echoed the importance of institutions in creating local environments conducive to learning and innovation (Moulaert and Sekia 2003). Similar to the studies of successful manufacturing districts, these new ideal-types of regional economies require a density of institutions and interaction between them.<sup>1</sup>

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<sup>1</sup> The 'institutional turn' in economic geography is a contrasting approach to the New Economic Geography, which focuses on the relationship between agglomeration, specialization, and scale economies and does not take institutional contexts into account (Amin 1999).

A related perspective emphasized networks as the analytical framework from which to explain and understand regional economic development (Camagni and Capello 2004). Through interfirm and interorganizational networks, scholars argue(d) that flows of information, capital, and other factors of production and innovation shaped a region's development path. Within economic geography and regional studies, scholars held that network flows within and between regions facilitated innovation and consequently economic development, by enabling the full exploitation of local knowledge and the introduction of knowledge from outside the region (Brandt et al. 2009).

The institutional and network paradigms share common logics: by establishing and perpetuating relationships, institutions/networks allow for the exchange of information and promote learning, and are therefore conducive to innovation and economic development. These paradigms focus on a regional level; they help explain the phenomenon of regional economic divergence, and they also define and are defined by the region as a geography (Harrison 2013).

It is important to note that neither networks nor the presence or density of institutions have been demonstrated to be sufficient conditions for economic development. First, empirical support for both perspectives is based largely on case studies of success. Yet explaining success is not equivalent to validating theory. Second, variation within cases is significant. Not all institutions or organizations contribute to regional development and innovation, and those that do have varying levels of importance and are successful due to varying features or characteristics (Macleod and Goodwin 1999). And in some instances, strong and dense institutions and well-developed networks can actually prevent development and promote lock-in, for example via brittle institutions or insular networks (Tödtling and Trippel 2005; Isaksen and Trippel 2016).

It is also important to note a distinction between institutions and organizations (or institutional actors) (Zukauskaitė et al 2017; Farole, Rodríguez-Pose and Storper 2011; Bathelt and Glückler 2014). Although research in economic geography or regional studies frequently describes institutions using North's definition or a derivation of it, there is a tendency to focus on formal institutions (e.g. legal frameworks) and/or to conflate formal institutions with organizational actors (e.g. universities, associations, governing bodies) when operationalizing the concept. In some ways, a region's organizations represent its institutions, since organizations are products of their institutional contexts. But organizations are also actors who engage independently with their institutional contexts. They may support or reproduce existing institutions, but they might also confront or challenge them (Zukauskaitė et al. 2017). Organizations can thus reveal information about institutions, but they should not serve as unqualified proxies in a research design.

## **Research design and contributions**

The dissertation engages with these themes in the following ways. First, it focuses on how organizational actors attempt to shape their regions' development paths. How do they attempt to influence the effects of agglomeration and their regions' positions within extra-regional economic and political systems? I examine this question in the context of economic imbalances

or differentials between regions. How do organizations strategize in reaction to the presence of economically stronger neighbors?

Relationships between stronger and weaker regions are particularly relevant in the context of growing divergence between regions. Growth of a neighbor is especially likely to affect a region, but whether the effect is positive or negative, or both, appears to depend on factors endemic to the region itself. This dissertation thus aims to contribute to the broad question of how a region's development is influenced by its neighbors. It specifically addresses questions about how institutional actors in a region perceive and react to their stronger neighbors' economic development when creating strategy for their own.

Second, the research design focuses on the role of non-firm economic development organizations in shaping their regions' development paths, a topic currently under-addressed. Existing research about the effects of institutional and network contexts on regional economies primarily studies firms and firm outcomes. Some studies of scientific and research networks, transportation governance, and municipal knowledge exchange examine relationships between non-firm organizations, but they do not discuss regional economies (Graf and Henning 2009; Wanzenböck et al. 2015; Bergé et al. 2017; Dörry and Walther 2015; Dörry and Decoville 2016; Ansell et al. 2017; Zerbinati 2012).

Yet economic development organizations merit explicit research attention, as they have particular potential to influence regional development paths. These organizations generally hold a mandate to create development strategies on behalf of their constituents and/or in the public interest. That mandate includes responding to the opportunities or risks posed by stronger neighboring regions. They are also the actors tasked with implementing policy directives and planning initiatives that are intended to address the concerning trends of interregional divergence, such as the European Union's "Smart Specialization" approach, or competitiveness benchmarking. These concepts themselves have been spun off from earlier academic research<sup>2</sup> (Foray 2011; Rodrik 2004; Huggins 2003). Understanding how actors interpret such concepts and act upon them is therefore important to the continued development of effective theory, policy, and practice.

Finally, while institutional contexts are acknowledged to be essential components in a region's economic development path, they are unique to each region. Mimicking of policy or best practices in economic development planning is widely decried (Kitson et al. 2004; Tödting and Trippel 2005; Foray et al. 2011.) Yet at the same time, policy initiatives have struggled to provide direction for how a region's unique context can best be evaluated and understood, and how good policy responses can be developed based on that evaluation (Capello and Kroll 2016; Muller et al. 2017). Consequently, the chapters in this dissertation try to propose tools, including typologies and frameworks, which can be used to analyze the mechanisms operating within regions without pushing the regions themselves into overly-generalized categories.

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<sup>2</sup> Both smart specialization and competitiveness benchmarking have been criticized for inaccurately applying academic findings, but they nevertheless have foundations in academic literature (Hassink and Gong 2019; Boschma 2004).

## Content and findings

The first chapter of the dissertation investigates forms of integration between regions and across borders in the Upper Rhine, comparing patterns of functional integration (commute flows) with patterns of organizational integration (network ties between economic development organizations). Findings indicate that both forms of integration are primarily driven by the presence of economic differentials between regions and countries. However, the spatial patterns of functional integration differ from those of organizational integration. For example, some regions experience strong commute flows yet have weak organizational ties, some experience the opposite, and still others experience both strong functional and institutional integration. I propose a typology of potential relationships between regions that explains these differing patterns of integration, and highlights how economic development actors respond to the effects of economic differentials on their regional economies.

In addition to economic differentials, the findings of chapter one also identify other variables influencing organizational integration. Cultural and language similarities, physical geography and infrastructure, and individual contacts all mediated the development and maintenance of network ties. Chapter one thus highlights the intricate relationships between different forms of institutional integration, as well as their relationships with functional integration. It contributes to the understanding and operationalization of cross-border institutional integration as a concept, as well as to the ways in which organizations and institutions are shaped by economic differentials.

The second chapter compares how economic development organizations in two regions, Aargau, Switzerland, and Lörrach-Waldshut, Germany, select strategies that take their economically stronger neighbors into account. These strategies are defined as “spatial positioning,” in which a region acts on spatially-mediated opportunities or threats presented by a geographically proximate region. Using document analysis, network analysis, and semi-structured interviews, chapter two finds that the two case study regions’ approaches to spatial positioning reflect a diversity of existing theories about how regions might be affected by their neighbors’ economies. In discussing these findings, I argue that spatial positioning is a distinct form of economic development strategy, and that understanding its implementation(s) is essential to the development of regional economic policy that encourages identifying specializations.

Chapter three uses qualitative interview data to examine how economic development actors conceive of and operationalize place competitiveness in a case study of the Upper Rhine, an economically diverse megaregion. I analyze where and how practitioners’ understandings of “competitiveness” align or differ from how the concept is understood in policy and theory. Findings indicate that actors often engage in both collaborative and competitive strategies simultaneously. While they describe the concept of competitiveness and interregional competition using market-based logics, this reflects a strategic rhetoric and does not correspond closely to their actual approaches. Place competitiveness is a fuzzy concept, both in theory and in its policy applications, as is the contrasting notion of collaboration between geographies.

Together, these three chapters foreground how theoretical understandings of interregional relationships (e.g. institutional integration, agglomeration shadows and borrowed size, place

competition and urban network externalities) correspond with how interregional relationships develop in practice (e.g. organizational networks, spatial positioning, and practitioner usage of ideas like place competitiveness and collaboration).

## Chapter One NETWORKS

### Dimensions of regional cross-border integration and economic development in the Upper Rhine

Integration across national borders is a core objective for the European Union (Evrard and Chilla 2021; Medeiros 2014). Mechanisms of integration, including liberalization of policy, the reduction of barriers, and the coordination of regulatory frameworks, should theoretically drive mobility of people, goods, and capital across borders. These flows of factors are (often) normatively assumed to promote a range of desirable outcomes, including enlarged markets, regional resilience, and the potential for convergence of social and economic conditions on either side of the border. EU policy further assumes that these outcomes promote overall economic growth and social and political cohesion; as a result, the European Union invests heavily in promoting cross-border integration (Evers 2008; van Houtum and van der Velde 2004; Medeiros 2019; Basboga 2020). Yet the actual relationships among these potential mechanisms for cross-border integration, the integration outcomes, and their social and economic implications are much fuzzier. Integration has been shown to take multiple forms, some of which have clear positive relationships with the liberalization and coordination of policy, and others which do not. In particular, the presence of economic differentials appears to drive divergent patterns of some forms of integration.

This chapter seeks to answer the broad question of how patterns of organizational integration (a form of institutional integration) and functional integration relate. In a case study of the trinational Upper Rhine region, which includes parts of France, Germany, and Switzerland, I use quantitative and descriptive social network analysis methods to compare cross-border and interregional networks of domestic economic development organizations (indicating organizational integration) with commuter flows (indicating functional integration). To better understand the drivers and dynamics involved in network formation, I analyze data from interviews with representatives of the organizations in the network.

Findings indicate that patterns of both organizational integration and functional integration are driven by the presence (or perceived presence) of economic differentials, but in substantively different ways. Organizational integration, as an indicator, reflects both formal and informal types of institutional integration. Finally, the relationships between functional integration, institutional integration(s), and structural features of a border region are complex, with multiple paths of mutual reinforcement.

In this chapter, I give particular attention to two mechanisms that affect cross-border relationships: the presence and evolution of less formal and informal institutional integration, and the effect of economic differentials on either side of a border. In contrast to existing literature studying institutional integration, the research design distinguishes organizational integration from the broader concept of institutional integration. The mixed-methods approach allows me to investigate how organizational integration interacts with or reflects other types of formal and informal integration. By focusing on economic development actors, a set of organizations representing domestic interests but required to respond to effects of cross-border economic differentials, the chapter also provides unique insights into how economic differentials influence different forms of cross-border integration. This is of ongoing interest as



interregional economic disparities appear to be growing around the world, in both border and internal regions (Iammarino et al. 2019; Ganong and Shoag 2017).

The first section of the chapter introduces the conceptual framework for the research. The second section describes the methodological approach, and the third section outlines the research findings. The discussion section analyzes findings, proposes a typology of integration patterns relating functional and organizational integration, and places the research findings within broader discussions of how different forms of integration interact and drive one another.

## **I. Conceptual framework**

The idea of cross-border integration is closely interwoven with European Union policy and its objective of promoting cohesion between and within the nations of the EU (European Commission 2017).<sup>3</sup> As a result, cross-border integration has been studied extensively, both in policy and academic work, and both empirically and theoretically. Yet integration is a concept frequently invoked without an explicit definition, and research on the topic has utilized a variety of theoretical and operationalized definitions for it. The lack of explicit definition is a particular challenge because some of the different definitions given to ‘integration’ may, at times, be mutually exclusive.

Integration is often, but not universally, defined as an increase in the interactions that occur across a border (Buch et al. 2009). At times, it is also used to refer to convergence in territorial conditions on either side of a border (De Boe et al. 1999). Some research, such as Svensson and Nordlund’s case study of Euroregions in Sweden and Hungary, includes both the aforementioned ‘interactions’ and ‘convergence’ in the definition of integration (Svensson and Nordlund 2015). However, research has shown definitively that strong interactions across borders do not necessarily correlate with convergence (De Boe et al. 1999), and in some cases interactions may even be driven by the presence of differentials (Chilla and Heugel 2019; Decoville et al. 2013). In a paper examining the theoretical foundation for cross-border integration as a concept, Sohn notes that cross-border integration could include a diversity of flows and transactions that simultaneously lead to convergence and divergence in different arenas (Sohn 2014).

Integration could also comprise the interaction or convergence of many different elements, with scholars distinguishing different forms of integration. Most common, and most relevant for this chapter, are “functional integration,” and “institutional integration,” but a number of other conceptualizations of integrations have been put forward. For example, Reitel’s case study of the Basel cross-border metropolitan region identifies four types of integration (morphological, territorial, intentional and institutional) (Reitel 2013). In studies on domestic metropolitan integration, van Oort et al. distinguish “spatial integration” from “functional integration,” while Meijers et al. identify three types of “coherence” and refer to “functional” and “institutional” integration (van Oort et al. 2010; Meijers et al. 2017). Among others, Decoville et al. (2013) refer to “economic integration,” and Evrard and Chilla (2021) to “political integration.”

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<sup>3</sup> Cohesion is itself is very difficult to define or operationalize, and may be at its most useful, as a concept, when it remains vague (Evers 2008).

Scholars use the term “functional cross-border integration” to refer to flows of people, goods, services and capital across borders, as well as the larger socioeconomic implications of this (e.g. trends in population or incomes, or supply chain/production system configurations) (Capello et al. 2018).<sup>4</sup> One of the most common metrics for operationalizing functional integration is commute flows; others used include migration/resident citizenship, and cross-border consumption or retail tourism (Sohn et al. 2009; Matthiessen 2004; Meijers et al. 2017; ESPON 2013). Yet functional cross-border flows themselves appear to vary. For example, van Houtum and van der Velde (2004) show that the mobility of goods has increased more than the mobility of labor under liberalized European policy. Consistent among the implicit and explicit definitions for functional integration is that it consists of socioeconomic interaction in the form of flow or exchange.

“Institutional integration” has been defined (or its definition implied) and operationalized in a broader variety of ways. The concept of an institution in social sciences varies, but a widely used definition is that of the “rules of the game,” including formal and informal laws and regulations, norms, and codes that shape interactions (North 1990). Under this definition, institutional integration could refer to a number of diverse concepts and metrics. In practice, “institutional integration” has been used to describe cooperation between public and public-private representatives of cities, metropolitan areas, or regions (Meijers et al. 2017; Matthiessen 2003), any “potentially cooperative” interactions between formal actors on either side of a border (Sohn et al 2009), the development of formal governance structures (Reitel 2013), the coordination of regulatory or juridical structures (van der Broek and Smulders 2015), the creation or formalization of cross-border administrative or cooperative actors or bodies (Blatter 2003; Engl 2016; Meijers et al 2017), or common or shared linguistic or cultural identities, norms or routines (Paasi 2011; Harrison and Growe 2014; Capellano and Makkonen 2020; Bakry and Growe 2021). Most empirical cross-border study explicitly examining institutional integration has focused exclusively on formal institutions and interactions that are generated by actors. They evaluate either the relationships between a specific subset of formalized actors or the level to which regulatory and legal frameworks have been coordinated (Sohn et al 2009; Reitel 2013; Buch et al. 2009).

A crucial lack of clarity concerns whether the defining elements of institutional and functional integration are the subjects of integration, or the process of integration. If institutional and functional integration are defined by the process by which they occur, then institutional integration represents interactions generated by formal, actor-driven processes (e.g. a political mandate), and functional integration represents “market-driven” or de facto interactions. If defined by the subject, then institutional integration represents interactions that occur between or involving the formal and informal laws and regulations, norms and codes that govern behavior. Functional integration then represents interactions occurring between or involving economic factor flows. This distinction is important, because some interactions would be considered “functional” under the former method and “institutional” under the latter. As an

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<sup>4</sup> An exception to this definition of functional integration, though not used in a cross-border context, is van Oort et al.’s study of metropolitan integration in which functional integration is represented by degrees of economic specialization and diversification, commuting flows, and interfirm relationships.

example, the emergence of one dominantly-used language in business or governance in a multilingual border region could be considered a form of functional integration if the process is the defining factor (as it could emerge de facto), or a form of institutional integration if the subject is the defining factor (as choice of language represents an informal institution).

A second lack of clarity concerns the use of formal actors – organizations – as proxies for institutional integration. Several scholars have argued that this conflates institutions with organizations, two concepts that should be distinct (Zukauskaitė et al 2017; Farole, Rodríguez-Pose and Storper 2011; Bathelt and Glückler 2014). To some extent, it can be argued that organizations are a representation of institutions, as organizations are constructed in and reproduced by social environments. Yet organizations are also actors with agency. They can be formed in order to perpetuate or to challenge existing institutional contexts, or they may not engage with them at all (Zukauskaitė et al 2017).

Given this context, I adopt the following definitions and operationalizations. First, I define cross-border integration as the intensity of interactions occurring across the border. The presence of differentials, divergence, and convergence between the territories of the border region is a crucial context for the study of integration, since it underpins much of the political and economic impetus for integration efforts. However, as the research investigates how integration relates to convergence or divergence, I distinguish these two concepts. Second, I distinguish functional and institutional integration on the basis of the subject of integration, not the process or initiator of integration. Therefore, functional integration consists of factor flows or exchange, and institutional integration consists of any interactions involving formal or informal institutions.

The study examines integration between a specific subset of formal institutional actors: organizations that are engaged in promoting economic development in the case study area. Integration of economic development organizations is of particular relevance in the study of cross-border integration for two reasons. First, a significant portion of these actors are domestic public or public-private entities that represent local and regional political jurisdictions, which means that their actions prioritize domestic interests.<sup>5</sup> Second, because these organizations are engaged in economic development, they are responsible for intermediating, responding to, and strategizing regarding both functional economic integration and the presence of differentials on either side of the border. In representing their jurisdictions' interests, they may have different priorities regarding functional integration or the preservation or reduction of differentials. For some, the border may represent a resource to be exploited; for others, it may represent a threat to their economic health, or both simultaneously (Sohn 2014; Decoville et al. 2013; Chilla and Evrard 2013). Integration between these organizations therefore represents non-mandated institutional integration that interacts uniquely – and intensively – with questions of differentials and convergence across borders.

Several projects have studied networks between organizational actors in cross-border regions. But these give a particular focus to organizations that represent cross-border interests (e.g. governance or advisory entities with representatives from both/all sides of a border),

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<sup>5</sup> Actors for whom integration is the primary mission were excluded from network analysis of interregional and cross-border institutional integration, though they are included in descriptions of the full network and participated in interviews.

and/or to topics that are not inherently defined by tensions around convergence, differentials, and functional integration (e.g. the provision of cross-border public transit<sup>6</sup>) (Dörry and Walther 2015; Dörry and Decoville 2016). Economic development organizations, however, must engage with these tensions. For this reason, they deserve particular attention.

I therefore investigate patterns of formal and semi-formal cross-border networks between economic organizations in the case study region and compare them to patterns of functional integration. I operationalize functional integration as cross-border commuting flows, due to data accessibility, and use descriptive socioeconomic and population data to establish context. In addition to using social network analysis techniques to establish and analyze patterns of institutional integration between organizations, I also use qualitative interviews with stakeholders to identify potential mechanisms driving this integration and to understand how informal institutions including culture and norms influence network formation.

## **II. Methodology**

### **A. Case selection**

I use a mixed-methods case study of the Upper Rhine region. The boundary for the Upper Rhine region is that of the Upper Rhine Conference, a multilevel cooperative governance entity covering the region (Bakry and Growe 2021). It includes the Swiss cantons of Basel-Stadt, Basel-Land, Aargau, Solothurn, and Jura, the French départements of Haut-Rhin and Bas-Rhin, and the German regions of Südpfalz, Mittlerer Oberrhein, Südlicher Oberrhein, and Hochrhein.

The Upper Rhine provides a critical case for investigating relationships between cross-border institutional and functional integration, in particular with regard to questions of economic development. Through its long-term, intensive efforts at cross-border cooperation, the Upper Rhine has a history of successful cross-border coordination and extensive cross-border institutional and organizational infrastructure (Pupier 2020). Furthermore, the region has a high degree of functional integration in terms of commuter flows, advanced physical cross-border infrastructure, and is economically strong as a whole (Walther and Reitel 2013).

Yet although the Upper Rhine region represents an “advanced” border region, equipped with the institutional, organizational, and physical assets considered essential to cross-border integration, differentials persist (see Figure 1B). The cost of housing, average salaries and income, industrial specializations, and in- and out-commuting patterns vary across the Upper Rhine. As a result, the Upper Rhine presents a case in which there are exemplary conditions for institutional and functional integration, but these are still likely to be shaped by the presence of economic differentials. Integration outcomes that occur should hold significance for the general problem of cross-border integration (Flyvbjerg 2006).

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<sup>6</sup> The presence of socioeconomic differentials is, of course, relevant to cross-border cooperation on topics like public infrastructure or public transit. However, economic development is unique in that there are situations in which organizations on one side of the border can clearly benefit from strategically maintaining or perpetuating differentials.

## **B. Evaluating functional integration**

I use cross-border commuting flows in the Upper Rhine region as a metric for functional integration. Although functional integration can have multiple (and sometimes contradictory) facets, of which commute flows are only one, strong commute flows do indicate a form of functional integration. Not only are they recommended by the availability of data, but commute flows also represent integration of cross-border labor markets, a particular issue of concern for economic development organizations seeking to promote the development of firms and jobs in their region. To provide context, I also present indicators capturing socioeconomic conditions – and their variability – in the Upper Rhine region, including local population growth or shrinkage and level of urbanization.

## **C. Evaluating institutional integration**

I use social network analysis tools to quantitatively and descriptively evaluate patterns of relationships between economic development organizations in the Upper Rhine. The network analyzed consists of 1594 unique links between 357 nodes, and is a static capture of data gathered between April 2020 and April 2022.

Nodes in the database represent formal organizations involved in promoting or fostering economic development in the Upper Rhine. They include public departments of economic development at the local and regional level for villages and cities, organizations that advocate for or provide intermediation for industries or trade, public and public-private entities that provide space or support (explicitly) for small businesses and startups, universities, research institutions, technology transfer institutions, formalized networks for the exchange of research or technology, cross-border organizations that include economic development promotion as part of their missions, organizations that promote and support innovation, and organizations that serve as intermediaries for workers and employers. These categories reflect organizations commonly identified in literature on regional institutional environments and their effect on economic development (Cooke and Morgan 1993). All nodes represent formalized organizations in that they are either government or incorporated entities; networks or joint projects were included only if they had their own independent governing board and budget. Node headquarters are located either within the Upper Rhine region, or their service area includes part or all of the Upper Rhine. Organizations operating at the national level were only included if their headquarters was located within the case study region.

Specifying the boundaries of a network is a core problem in social network analysis. To conduct a meaningful empirical analysis, it is necessary to correctly define which nodes and what kinds of relationships between them are included (Galaso and Kovárik 2018). I use a hybrid approach comprising both definitional and relational approaches. To compile an initial list of node entities, I began by conducting a web search based on search terms for the organizations of interest within the territorial boundary of interest. I then compiled a database of these entities' partnerships and the affiliations of their board members, using web-scraping of publicly provided data. In an iterative/snowball approach, I then checked these partnerships for eligibility to be included in the database.

Combining both a definitional (territorial boundary and functional criteria) and relational (snowball) approach to construct a network could compromise the empirical validity of findings because the network's boundaries are being selected on both nodes and edges (Laumann et al.

1983; Knoke and Yang 2019). However, I argue that such inference and estimation problems do not apply here because the hybrid network-building approach allows the capture of a near-complete network of nodes, which is an essential advantage over choosing to only use a definitional approach.

The “partnerships” between nodes in the database represent a variety of relationships: founders, members of the organization, sponsors, partners in general or project-specific aims, and interlocking directorates (shared members on governing boards.) The conceptual basis for this is to capture relationships between organizations that could represent communication and coordination between them. Consistent among these relationships is the organization’s choice to publish their existence on their website, in other public materials, or to disclose it in a survey or interview. It is assumed that these links are bidirectional – in other words, if institution A lists institution B as a partner, the partnership is assumed to be reciprocal even if B does not list A as a partner.

Data on partnerships was gathered via three methods. First, organizations’ websites were scraped for mentions of other organizations. Second, a supplementary survey of 105 nodes asking them to name their partners was sent via email, with a response rate of 42. Finally, 30 nodes were approached for interviews based on three criteria (holding highly central positions in an initial analysis of the network, representing public actors with regional service areas, and/or providing for overall diversity in geography, scale and type among the interviewee pool). 26 nodes participated. The question about partnerships was repeated in the interview. 89 percent of the nodes in the network provided information on their partnerships via at least one of these methods. This high rate of response, combined with the assumption of reciprocal/bidirectional links, produces a sufficient real complete network estimate (Kossinets 2006; Dörny and Walther 2015).

Although this definition of link is broad and likely includes links with different levels of importance and influence, alternative methods for weighting or distinguishing between links would either fail to capture distinctions or be themselves flawed. For example, while interlocking directorates might differ in their effect from “partnerships” named on websites, there is so much potential variation in the involvement and actions of a board member or an unspecified partner that differentiating them adds little to the analysis. Another alternative would be to depend solely on survey data, as has been done in other network studies, but this method requires very high rates of response (in order to meet the needs of a social network analysis) and can suffer from roster-recall issues (the possible inability of respondents to accurately remember and describe all links (Ter Wal and Boschma 2008; Kossinets 2006). This method thus sacrifices specificity but gains comprehensiveness.

I examine node centrality and participation, identify clusters using algorithm detection and compare these to regional affiliations, and compile descriptive statistics about the interregional and cross-border links. I use R library igraph and Python library NetworkX to conduct these analyses, and open-source software program Gephi to visualize the network.

#### **D. Network description**

Nodes in the network have a set of attribute data. This includes their “type” category, which defines their general activities, their country and region (based on the location of their

headquarters), and the scale at which they operate (based on the geography of their service areas) (Table 1A).

**Table 1A: Node attribute data and definitions**

Attribute	Categories	Description
Region	Aargau, Basel, Bas-Rhin, Cross-border, Haut-Rhin, Hochrhein, Jura, Mittlerer Oberrhein, Solothurn, Südlicher Oberrhein, Südpfalz	Nodes with headquarters located in these regions
Country	France, Germany, Switzerland, Cross-border	Cross-border organizations are those that represent the interests of more than one country
Type	<p>Economic development, planning, and governance</p> <p>Trade or industry promotion</p> <p>Startup/small business/innovation support</p> <p>Cross-border coordination</p> <p>University</p> <p>Research institute/technology transfer/competence center</p> <p>Research network</p> <p>Other</p>	<p>Promoting economic development, or coordinating regional governance and spatial planning</p> <p>Chambers of commerce, industry-specific advocacy or coordination (including employers' associations and professional associations)</p> <p>Providing specific support or resources to startups, entrepreneurs or small and medium businesses with the primary mission of promoting entrepreneurship, innovation and/or job creation</p> <p>Promoting the coordination, communication, or cooperation of organizations or projects across international borders. This category includes organizations whose mission is cross-border coordination, but who represent a specific region.</p> <p>The "other" category includes organizations who promote innovation or economic</p>

		development through their work but do not fit the above categories (e.g. workforce intermediaries).
Scale	National	Organizations with service areas at the national level
	Macroregional	Organizations with service areas covering more than one of the 12 study area regions or at a scale greater than canton (Swiss), département (French) or regional planning area (German).
	Regional	Canton/département/regional planning area
	Microregional/Local	Regions smaller than canton/département/regional planning area

I primarily use regional affiliations to examine cross-border integration patterns in the network. Regional geographies are defined by administrative boundaries (Canton, département, and regional planning area (Planungsregion)). These boundaries reflect roughly comparable organizational structures for economic development functions across the three countries of the Upper Rhine.

I also test these boundaries against relational communities identified in the network data. A number of algorithms have been developed to detect the existence of communities (also referred to as clusters or modules) within networks. From seven common community detection algorithms, I chose the “spinglass” algorithm as it produced the highest modularity score and is well-suited to small-n networks (Yang et al. 2016). Comparing the location and content of algorithm-detected communities can indicate whether organizations are likely to network with other nodes based on physical proximity, political-territorial proximity (e.g. organizations that serve the same jurisdiction), or similar roles or functions (e.g. public agencies partnering with other public agencies).

Comparing the algorithm-detected communities with regional networks reveals four findings with relevance to questions about cross-border economic development networks. First, the consistent grouping of a majority of regional nodes within a single algorithm-detected community indicates that relational/network-defined communities do correspond closely with those defined by regional jurisdictional boundaries. The spinglass algorithm detected nine distinct communities in the Upper Rhine network. At least 75% of each region’s nodes were placed in the same community. Second, two regions were grouped with a (domestic) neighbor, with most of Südpfalz’s nodes grouped with Mittlerer Oberrhein, and most of Haut-Rhin’s with Bas-Rhin.

The community with the most diverse representation of different regions consisted of nodes located at the trinational border area near Basel. Finally, it is notable that cross-border organizations were distributed throughout six of the nine communities. This suggests that



cross-border organizations are embedded within regional networks, rather than forming their own community of cross-border entities.

### **E. Qualitative methods**

To investigate potential mechanisms driving patterns of institutional integration and shaping their relationship with patterns of functional integration, I supplement the social network analysis data with qualitative interviews (Reid and Smith 2009). Between August 2020 and October 2020, I conducted 17 semi-structured interviews between 30 and 120 minutes in length with representatives of organizations in the social network. Interviewees were chosen to represent a diversity of geographic scales (local, regional, macroregional), organization type and activities, and geographic location.

Among the interview questions, I asked organizational representatives to identify and describe their organization's partnerships, to explain or theorize why and how partnerships emerged and why they might vary between areas, and to explain what outcomes they saw emerge from these networks. Interviews were transcribed and responses categorized by both interview question and by a set of content themes corresponding with the research questions (Mayring 2014). Adding the qualitative interviews helps triangulate to compensate for some of the previously mentioned limits to the social network analysis by allowing the identification of variation in quality, content, and duration of links within the network (Giuliani and Pietrobelli 2011).

## **III. Findings**

### **A. Functional integration: Socioeconomic context and commuter flows**

The Upper Rhine's population has grown steadily over the past ten years, but this growth is unevenly distributed and appears to be driven by different factors. In Switzerland and Germany, municipalities located in or near urban areas were more likely to have experienced population growth. In contrast, French municipalities' growth appears to be driven by their proximity to Germany or Switzerland. Both urban and rural areas located near the borders saw growth, while those further from the border declined (Figure 1A).

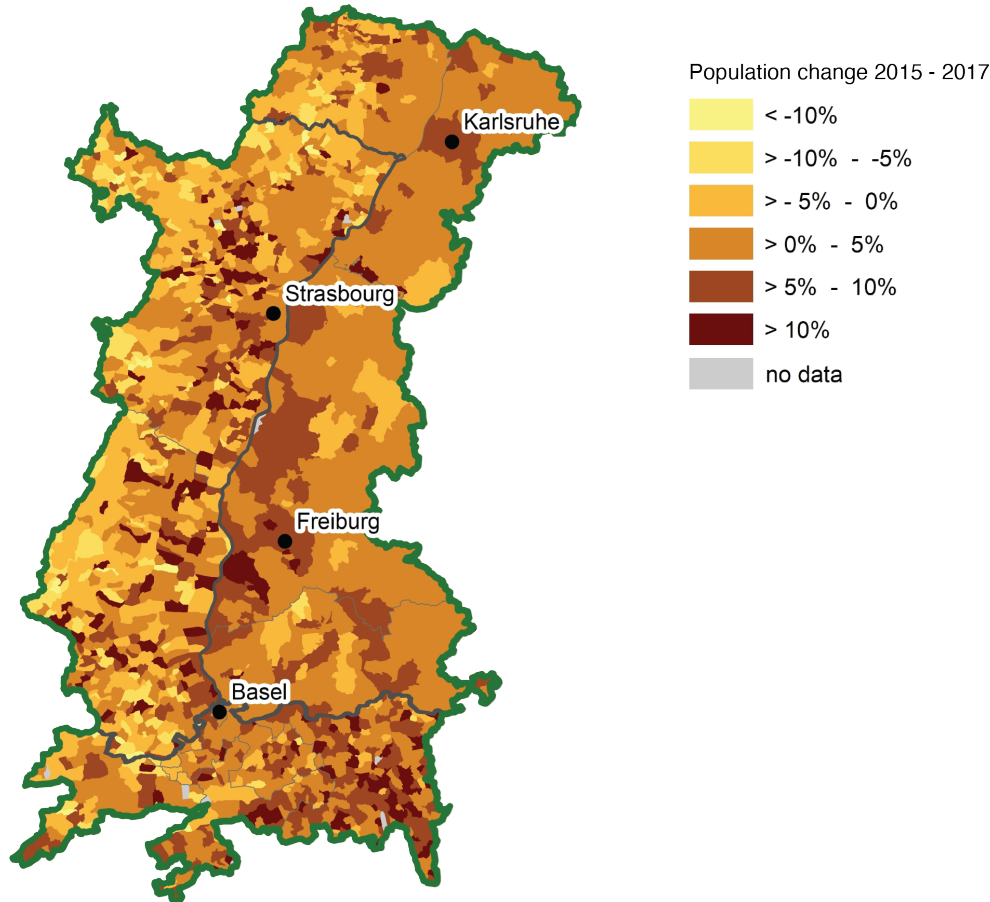
Economic productivity varies across the Upper Rhine. Annual gross domestic product ranged from €35,692 per capita in Haut-Rhin to €102,564 per capita in the Basel cantons. Growth in productivity was similarly variable, though in the past decade, all regions in the Upper Rhine experienced more growth than their home countries as a whole. Similarly, different regions within the Upper Rhine have different industrial mixes. Haut-Rhin, Bas-Rhin, Jura, Aargau, and Hochrhein all have high location quotients<sup>7</sup> for manufacturing industries (between 1.4 and 2.4), indicating concentration of employment in these industries relative to their home countries. Mittlerer Oberrhein has a high LQ for the information and communication industries, and Basel-Stadt has high LQs for technical and scientific services and

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<sup>7</sup> The location quotient estimates concentration of economic activity (often employment) in a specific industry or sector. It is the ratio of an industry's share of the economic activity of an economy to that industry's share of a reference economy (Isserman 1977).

financial and insurance services. Solothurn has a concentration of employment in logistics and warehousing (BFA 2018; INSEE 2019; BFS 2018).

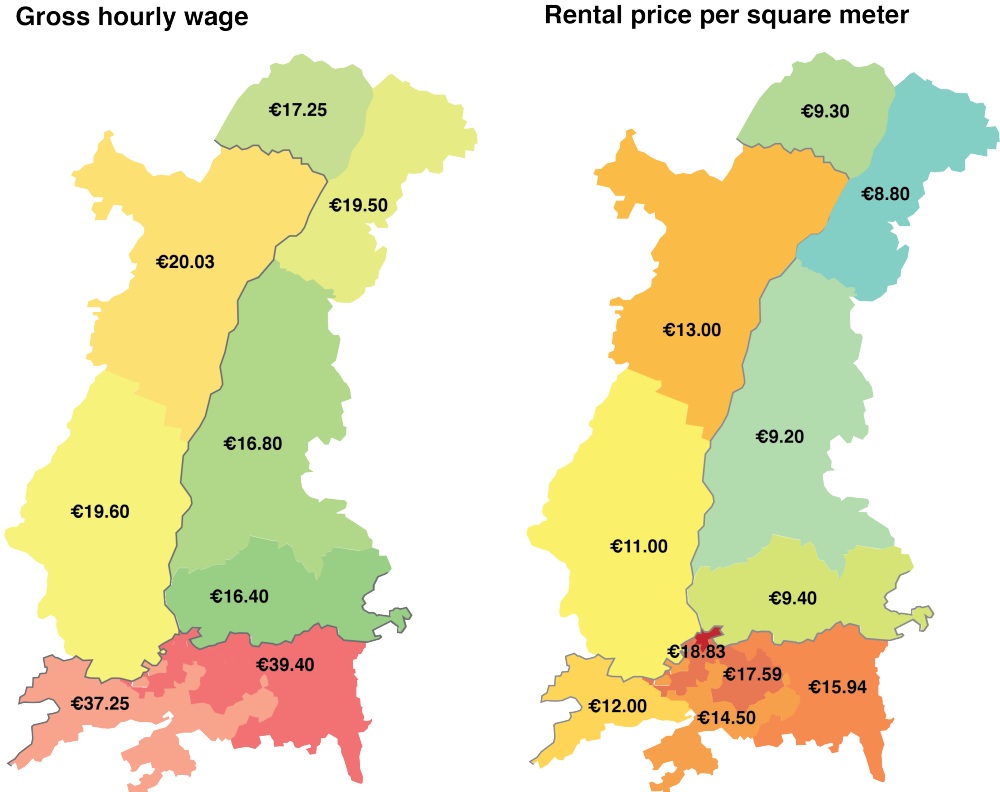
**Figure 1A: Population development and urbanization in the Upper Rhine**



*Sources: Bundesamt für Statistik (Schweiz), Institut national de la statistique et des études économiques, Statistisches Bundesamt (Deutschland). Geodata: Eurogeographics. Cartography: Stefan Hippe.*

Significant economic differentials are also present in wage levels and the cost of housing. The median gross hourly wage in the Swiss regions of the Upper Rhine is considerably higher than the median gross hourly wage in German regions or the average gross hourly wage in French regions across the border (Figure 1B). The price of rental housing is also more expensive in Switzerland than in France or Germany. These differentials almost certainly incentivize cross-border commuting between Switzerland and its two neighboring countries.

**Figure 1B: Differentials in wages and rental prices in the Upper Rhine region**



**Sources<sup>8</sup>:** Wage data Germany: INKAR, 2019 (median gross monthly wage). Wage data Switzerland: BFS LSE, 2020 (median gross monthly wage). Wage data France: INSEE, 2020 (average gross monthly wage). All data for full-time employees. Monthly data adjusted to hourly based on a 173-hour work-month. Rental data Germany: Statistisches Landesamt Baden-Württemberg, average rent 2018 by Raumordnungsregion. Rheinland-Pfalz Statistisches Landesamt, average rent 2021 Bundesland. Rental data Switzerland: BFS Gebäude- und Wohnungsstatistik, average rent 2020, canton. Rental data France: Le Groupe Seloger, 2021, average rents from public listings, 2021, département. Swiss Francs (CHF) are converted to Euros as 1CHF: €1.05.

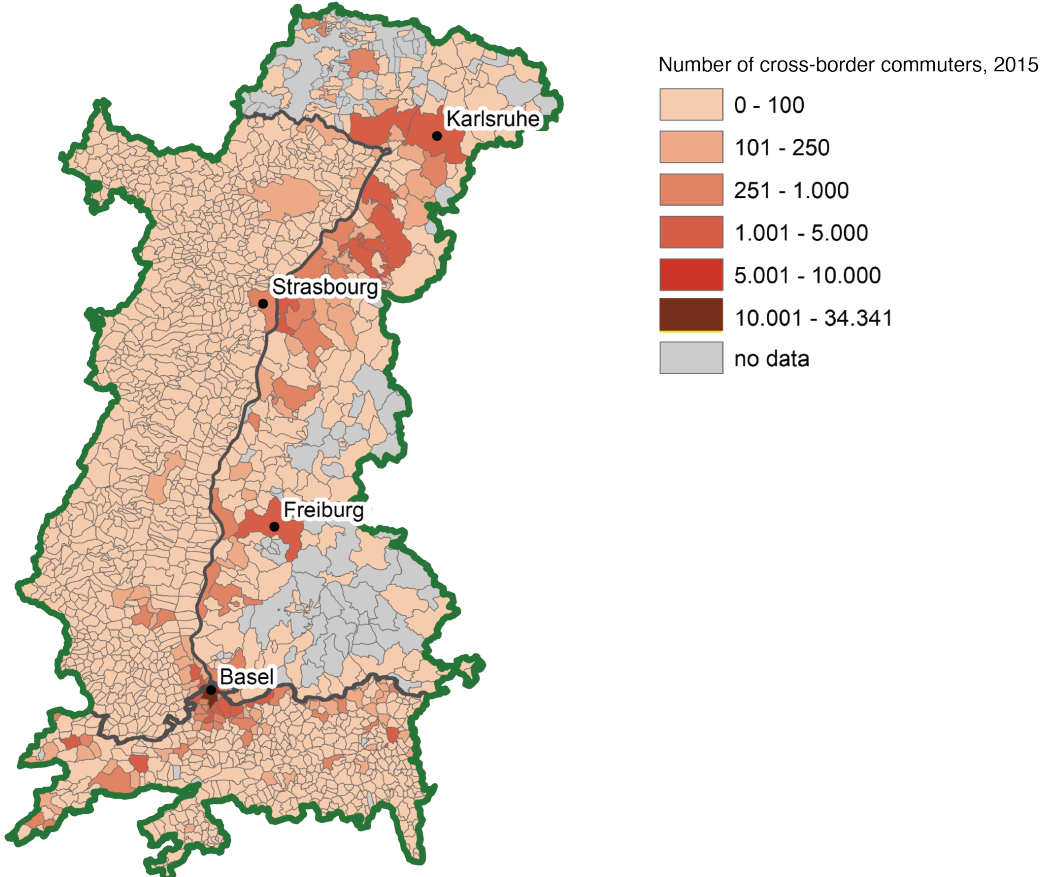
Commute flows in the Upper Rhine reflect both economic differentials and metropolitan effects. Areas drawing the most cross-border commuters are those that offer higher wages than their closest neighbors – the Basel area and Swiss communities along the border with Germany. The Basel area attracted the greatest numbers of cross-border commuters, and also offers the greatest differential in wages and rental costs versus its immediate German and French neighbors. French municipalities received fewer cross-border commuters than their closest neighbors in Germany and Switzerland, with the exception of some French

<sup>8</sup> The data represented in this figure are not directly comparable, but they nevertheless reflect the existence of significant economic differentials. **Wages:** French wage data for median wages was not available at the département level. Comparisons of the average wage to the median wage for France find that the average wage is consistently higher than the median. The French data here is consequently likely to be an overestimation of wages relative to the Swiss and German estimates. **Rental costs:** Swiss and German rental data is collected via publicly-administrated surveys. Swiss data reflects average rental prices for all units. German data reflects only new rental contracts; data for Südpfalz is an average and for all other German regions it is a median. French data reflects average prices from apartment listings collected by a private firm.

municipalities bordering Basel. Wage differentials alone do not explain patterns between France and Germany, where wages are higher in France but more commuters travel to Germany. However, unemployment rates tend to be higher in Bas-Rhin and Haut-Rhin versus in their neighboring German regions, which could drive commuting from France to Germany (OECD 2022).

Metropolitan areas also have higher levels of cross-border commuters, with the municipalities of Strasbourg, Colmar, Haguenau, and Mulhouse (the largest urban agglomerations in Haut-Rhin and Bas-Rhin) receiving the highest numbers of cross-border commuters among French municipalities. In Germany, the areas near Freiburg, Ortenau, Kehl and Karlsruhe received the most cross-border commuters.

**Figure 1C: Cross-border commuters in the Upper Rhine region**



*Sources: Bundesamt für Statistik (Schweiz), Institut national de la statistique et des études économiques, Statistisches Bundesamt (Deutschland). Geodata: Eurogeographics. Cartography: Stefan Hippe.*

**B. Institutional integration: Network partnerships**

For all three countries in the network analysis, the majority of organizational connections are domestic. Switzerland has the greatest percentage of international connections (between a Swiss node and a French or German node), and the smallest percentage of cross-border connections (between a Swiss node and a cross-border entity). However, this is likely due to the extensive cross-border coordination organizational infrastructure along the French-German

border, most of which is established and supported through EU programs. Similarly, while there are comparatively few connections between French organizations and German organizations, connections are dense between French organizations and French-German cross-border organizations, and German organizations and French-German cross-border organizations.

Organizational connections between Switzerland, Germany, and France do not show a single clear pattern or logic (e.g. shared language does not appear to give rise to more cross-border collaboration between two particular countries). Switzerland has more connections with Germany than France, France has more direct or cross-border connections with Germany than Switzerland, and Germany has a similar number of connections with each.

At the regional level, internal connections also predominate, with the exception of Haut-Rhin, whose institutions have more connections with those in Bas-Rhin than they do among themselves. Regions' institutions tend to have the greatest number of non-internal connections with their domestic neighbors, though a few regions have an international neighbor as their closest partner. Table 1B details these relationships.

**Table 1B: Interregional and Cross-border relationships**

<b>Region</b>	<b>Closest Domestic Partner (number of links)</b>	<b>Closest International Partner (number of links)</b>
Bas-Rhin (FR)	Haut-Rhin (75)	Südlicher Oberrhein (13)
Haut-Rhin (FR)	Bas-Rhin (75)	Basel-Stadt/Basel-Land (6)
Hochrhein (DE)	Südlicher Oberrhein (13)	Basel-Stadt/Basel-Land (15)
Südlicher Oberrhein (DE)	Hochrhein (13)	Bas-Rhin (13)
Mittlerer Oberrhein (DE)	Südlicher Oberrhein (8)	Bas-Rhin (1)
Südpfalz (DE)	Mittlerer Oberrhein	none
Aargau (CH)	Basel-Stadt/Basel-Land (17)	Hochrhein (3)
Basel-Stadt/Basel-Land (CH)	Aargau (17)	Hochrhein (15)
Jura (CH)	Basel-Stadt/Basel-Land (13)	none
Solothurn (CH)	Basel-Stadt/Basel-Land (16)	none

Regions with major metropolitan areas appear to act as hubs, with many connections to less-metropolitan neighboring regions. For example, Aargau, Solothurn, and Jura all have Basel as their closest regional partner, but have very few links with each other.

Finally, there is a set of links between Basel, Südlicher Oberrhein, and Bas-Rhin that seems to reflect a network between organizations in these major metropolitan cities, particularly among their universities (University of Basel, University of Freiburg, and University of Strasbourg), which are considered economic development-adjacent organizations (Etkowitz and Zhou 2017). Although the Karlsruhe Institute of Technology participates in multiple cross-

border cooperation organizations and projects with the other Upper Rhine universities, Karlsruhe and KIT do not appear to have as many direct links with universities outside of their region.

Basel also has the most connections with cross-border institutions, followed by Bas-Rhin and Südlicher Oberrhein, again reflecting a space of connections between metropolitan areas that transcends immediate proximity.

### **C. Institutional integration: Key nodes and node roles**

Node-level measures of closeness and betweenness centrality indicate the ease of access to other nodes and the extent to which a node lies on a path between two other nodes, respectively. In organization networks, these measures could reflect a node's ability to access or share information or broker relationships between other nodes. In the context of economic development, a more central node might be more likely to participate in or shape joint strategies, have access to more and more recent information, or be able to connect other organizations from neighboring geographies, diverse sectoral or industry backgrounds, or diverse functions and activities.

The category of cross-border organizations (those whose mission focuses on promoting cross-border cooperation) had the greatest average values for betweenness centrality and for closeness centrality. Cross-border organizations also made up eight of the 25 nodes with the highest betweenness centrality and 9 of the 25 nodes with the highest closeness centrality. This suggests that cross-border organizations could play a bridging role between domestic organizations, and that they tend to be connected to a large number of economic development organizations directly.

However, cross-border organizations largely did not serve as hubs for individual communities. Participation coefficients (PCs) and within-community 'z-scores' measure the extent to which a node participates within its own region or cluster, and the extent to which it interacts with nodes in other clusters (Guimerá et al. 2005). Together, these two metrics can be used to identify the roles played by specific nodes within a network with smaller communities, such as the Upper Rhine with its ten sub-regions. Based on their z-scores, nodes can be classified under a typology of "hub nodes", which are strongly connected within their communities, and "non-hubs"; each of these typologies is further segmented based on their PCs.

Using PCs and z-scores, ten nodes were identified as "connector hubs," or nodes that are strongly connected within their own community and moderately connected to others. Of these, only one was a cross-border organization. The other nine included two universities, a research institution, a university network, an innovation promotion institution, an industry network organization, and three economic development agencies. All operated at the macroregional or regional level. A significant majority (70%) of the other cross-border organizations were classified as "nonhub kinless" nodes, or nodes that have relatively low levels of connection. These findings suggest that cross-border organizations are unlikely to replace or substitute for domestic organizations in providing regional or local leadership in economic development.

#### **D. Qualitative data: Stakeholder perspectives**

Interview data reveal potential mechanisms that could explain the patterns of functional and/or institutional integration within the Upper Rhine. Discussing the national level, interview respondents noted two main explanations for why one country's organizations might have more connections with another's. Both reflected forms of informal institutional similarity (or lack thereof). A more similar business culture in Switzerland and Germany versus France reportedly facilitated Swiss and German collaboration. A stakeholder leading public cross-border collaboration efforts in the greater Basel area described how German and Swiss decision-making processes were largely conducted during official meetings, while French decision-making processes extended into informal lunch meetings following shorter official meetings (2020, interview). A Swiss stakeholder engaged in economic development felt that the "philosophy of how to do business" differed between Switzerland and the rest of the Upper Rhine, making collaboration more challenging (2020, interview).

Second, shared language and shared experience with multilingualism were noted by multiple stakeholders as facilitating collaboration between institutions. A representative of a public agency in Basel stated that it was slightly more difficult to work with French partners than German partners because of language barriers. This held true even when compared to Swiss partners from French-speaking Switzerland as the latter were more used to working in multilingual situations in which translation was needed (2020, interview).

Four additional factors shaping integration patterns at the regional level were identified through interviews. First, physical geography and infrastructure affect how regions interact (or don't) with their neighbors. Travel connections significantly facilitated not only functional, but also organizational ties. A stakeholder from the Lörrach area stated that poor transit connections and lack of a highway were responsible for their low level of interaction or collaboration with the Bodensee region, despite it being a domestic neighbor (2020, interview). Among subregions in Solothurn, one area (Schwarzbubenland) was described by a stakeholder as closely oriented to Basel due to the presence of a tram line, while another subregion at a similar physical distance had very few connections because the Jura mountains formed a physical barrier (2020, interview). This corresponded with the algorithm-identified communities in the social network – the local development agency for the former was grouped with primarily Basel-based nodes, while the latter's regional planning was grouped with other Solothurn nodes.

Second, shared history and shared culture were cited as influencing factors in both a region's relationships with its neighbors, and in defining the boundaries of the Upper Rhine region as a whole. A stakeholder working on economic development in Alsace noted that their organization had more contact with Swiss and German institutions than with French ones, and stated that Alsace felt particularly close to Freiburg and Basel (2020, interview), arguing that a shared history and culture drove this relationship.

Third, economic strategy and orientation shaped interregional relationships, as regions choose to position themselves vis-à-vis their neighbors in order to capture various economic benefits. As an example, the half-cantons of Basel-Stadt and Basel-Land have collaborated with Jura on a joint economic development plan since 2020. As per stakeholders from a public agency and a public-private economic development institution in Basel, Jura chose to begin

orienting the canton's economic development plan towards the Basel region rather than towards its traditional orientation toward Western Switzerland (2020, interview). Aargau, a previous partner of Basel-Stadt and Basel-Land for economic development planning, had chosen to take on more of its economic strategy independently of neighboring regions (2020, interview). In a cross-border context, all border cities in Hochrhein-Bodensee advertise their proximity to Basel (and specifically the Basel-Mulhouse Airport) as well as Zürich as advantages to firms and professionals (WFL Lörrach, n.d.; WST Rheinfelden, n.d.; Weil-am-Rhein Wirtschaft und Tourismus, n.d.; Grenzach-Wyhlen, Stadt, n.d.; Bad Säckingen, Stadt, n.d.). These strategies corroborate broader empirical findings that smaller and medium-sized cities can leverage economic and infrastructure advantages from larger neighbors, even across borders (Meijers and Burger 2015; Sohn et al. 2021).

Fourth, and related to the prior factor, is the influence of economic complementarities between regions on their relationships. Economic complementarities include sectoral or industry mixes, such as precision manufacturing in Jura and medical technology in Basel. They can also include supply chains and investment capital relationships between regions, such as the presence of Swiss capital and suppliers in Hochrhein (2020, interview). Another economic complementarity is that of economically advantageous political differentials; a representative of an economic development agency in Lörrach reported that firms seeking an EU location would choose Lörrach for its proximity to Basel (2020, interview). Finally, "bedroom communities" that provide housing and neighborhoods for workers with jobs in other cities represent exploitation of differentials in the cost and/or quality of living.

This leads to the fundamental question of how and why organizational integration develops between countries and regions. First, many cross-border organizations were developed and persist in response to demands generated by functional cross-border integration, particularly flows of commuters and goods. For example, the EURES-T Oberrhein entity, which advises cross-border workers on the technical and legal aspects of cross-border employment, was created in response to large flows of cross-border commuters in the Upper Rhine region.

Second, the establishment of cross-border organizations and organizational connections also led to a self-reinforcing relationship between functional and institutional integration: more functional integration creates a demand for more institutional integration, which in turn facilitates more functional integration (2020, interview).

A third driver for organizational integration, as well as other forms of formal institutional integration, is the practical need to respond to challenges that cannot be politically bounded. As an example, the construction of infrastructure (particularly transportation infrastructure) was frequently mentioned by stakeholders as an essential area for cross-border cooperation, and specific projects were cited as catalysts for continuing cross-border collaboration. The development of infrastructure projects was of particular interest for both public and private economic development actors, as it facilitated not only cooperative relationships but also continued functional flows of commuters and trade.

Finally, personal contacts between institutions were identified by stakeholders as decisive drivers for cross-border institutional integration (2020, interview). Through meetings and collaborations, representatives from organizations met their counterparts on either side of the border, developed a culture for working together, and learned about the contexts in which cross-border projects could be developed.



However, familiarity alone was not sufficient to drive cross-border organizational collaboration; rather, the development of strong personal relationships was cited as the key element. In describing his institution's collaboration with French and Swiss institutions, a stakeholder from an economic development agency in Hochrhein noted that their strongest geographical connections were due to the presence of strong, motivated individuals with whom they had close relationships (2020, interview). As an example, the institution had previously had a strong contact in France and had engaged in extensive cross-border work there. Since that person's departure they were in a phase of rebuilding relationships, and their closest current connections were with the Freiburg area (2020, interview).

#### **IV. Discussion**

##### **A. Relating functional and institutional forms of integration**

This chapter investigates the relationship between institutional integration – specifically that of formal, non-firm organizations, and functional integration. Data reveals not only potential drivers of relationships between organizational integration and functional integration, but also provides insight into the complex relationships between organizational integration and informal forms of institutional integration.

Metropolitan hubs both drive functional integration and serve as axes of institutional cooperation, especially among “scale-less” and macroregional organizations (these being universities, research institutes, and cross-border organizations, but also including some of the large cities' public and public-private economic development agencies). The major cities of the Upper Rhine act as magnets for cross-border commuting; they also host a majority of institutional infrastructure. In particular, Basel, Freiburg and Strasbourg host the three largest and most connected universities, headquarters for regional public economic development agencies, and large firms. Networks between these three cities were mentioned as significant in both general and sector-specific economic development (2020, interview).

Functional and organizational integration also appear to have a mutually reinforcing causal relationship in some cases. This is particularly the case for formal cross-border structures, but also the case for domestic organizations. Representatives of local and regional organizations repeatedly described their partnerships as part of their response to functional flows, including economic differentials affecting their region. Early success establishing formal institutions like cross-border governance structures in the Upper Rhine facilitated the expansion of functional flows, which in turn legitimated the need for continued and deepened institutional integration and incentivized cross-border organizational connections.

However, geographic patterns of organizational and functional integration do not match. Some regions with similar functional flows to a neighboring region have different levels of organizational integration with that neighbor. Some regions with little functional integration due to distance still maintain close organizational ties.

I theorize that these differences in patterns of organizational and functional integration can be explained by patterns of economic complementarity between neighboring cross-border regions, and propose a typology of three broad types (Table 1C). It reflects how domestic organizations perceive complementarities between regions. Descriptive statistics show that

economic differentials exist, and qualitative interview data reflects how stakeholders in domestic organizations attempt to react to these differentials.

The first type of integration pattern, similarities, describes a relationship in which both regions have similar sectoral and industrial strengths and similar costs of living. The second, multidirectional complementarity, describes a relationship in which two neighboring regions have distinct but related sectoral and industrial strengths that complement one another in a mutually interdependent way. The third, unidirectional complementarity, describes a relationship in which two neighboring regions have related sectoral and industrial strengths, but one region’s primary economic base is dependent upon that of the other.

**Table 1C: Typology of integration patterns**

Regional examples	Integration pattern		Integration drivers
	Functional integration intensity	Organizational integration intensity	
Südlicher Oberrhein-Basel	+	++	Similarities
Bas-Rhin-Südlicher Oberrhein, Hochrhein-Basel	++	+++	Multidirectional complementarities
Basel-Haut Rhin	+++	+	Unidirectional complementarities

The relationship between the regions of Südlicher Oberrhein and Basel could be characterized as one of similarities. Both Basel and Freiburg have significant life sciences industry clusters, are home to major universities, have highly educated populations, and are cultural centers for their regions. The two metropolitan centers are within an hour of one another by train, and some smaller towns in Südlicher Oberrhein are approximately half an hour from Basel by car. Yet functional flows between the regions are limited. However, organizational connections are thick, particularly between the universities in Basel and Freiburg. In this case, I argue that economic similarities discourage significant functional flows, but encourage organizational networking.

The relationship between Hochrhein and Basel is an example of multidirectional complementarities. There are differentials in salaries and the cost of living between the two countries, leading to significant functional flows of workers commuting from the Lörrach area to Basel. However, there are also extensive organizational ties between the two regions, with economic development organizations collaborating not just on cross-border infrastructure and regional projects, but on support for startups and entrepreneurship, education and youth programs, and innovation support. While the city of Lörrach is often viewed as a “bedroom community” for Basel, it is also a regional job center, with more in-commuters than out-commuters. Many of these commuters work in Lörrach’s retail sector, which is dependent upon shoppers crossing the border from Switzerland. But Lörrach also has significant employment in a variety of sectors, many of which (such as measurement technology) are related to Basel’s health care cluster. Lörrach also has a young startup scene that is closely networked with the

Swiss startup ecosystem. The area also hosts firms that wish to locate close to Basel but have an EU location, either instead of or in addition to a Swiss location (2020, interview).

Lörrach's economy is closely interwoven with that of Basel, but it leverages its lower costs of labor and land and its European Union regulatory structures to offer complementary economic opportunities that Basel does not. Through these strategies, it creates its own base of industrial productivity and employment. It is not wholly dependent upon Basel as either a customer for housing and services or for shopping tourism, though both sectors comprise significant employment and tax revenues and contribute to the large functional flows between Hochrhein and Basel. I describe this relationship as multidirectional complementarity. I argue that multidirectional complementary both encourages functional flows through the exploitation of differentials between the two sides of the border, and also encourages organizational integration as both regions attempt to develop a diverse cross-border regional economy.

The relationship between Haut-Rhin and Basel is an example of unidirectional complementarity. As with Lörrach, there are high functional flows across the border, as many people who work in Basel choose to live in France due to the low cost of living and the public educational system (2020, interview). However, the French areas near the border with Basel either serve primarily as bedroom communities and shopping destinations (for example, the commune of St.-Louis) or lack sectoral connections to Basel's economy (for example, the former industrial city of Mulhouse). St.-Louis hosts a second location of Novartis, one of the two major anchor firms of Basel's life sciences cluster, but it has relatively few smaller firms or spinoffs (Life Sciences Cluster Basel project). Stakeholders reported that this relationship has been changing for St.-Louis in recent years as the commune has begun to find a better "economic positioning" to Basel. Mulhouse, however, had not yet developed a strategy for exploiting its proximity to Basel (2020, interview).

These economic relationships are 'unidirectional' insofar as one side of the border (the French side, in this example), is wholly dependent upon the other to demand its services or goods. There is a supply relationship, but the vast majority of demand comes from the other side of the border. Unidirectional complementarity drives functional flows by exploiting differentials, but organizational integration is comparatively weak.

These typologies reflect how domestic organizations perceive complementarities between regions. Descriptive statistics show that economic differentials exist, and qualitative interview data reflects how stakeholders at domestic organizations attempt to react to these differentials. Their strategies, in turn, may perpetuate these forms of integration. Further research could explore real versus perceived complementarities, examining quantitative data on industrial relatedness between regions. It could also examine how both functional flows and organizational connections change over time.

## **B. Placing organizational integration within broader contexts of cross-border integration.**

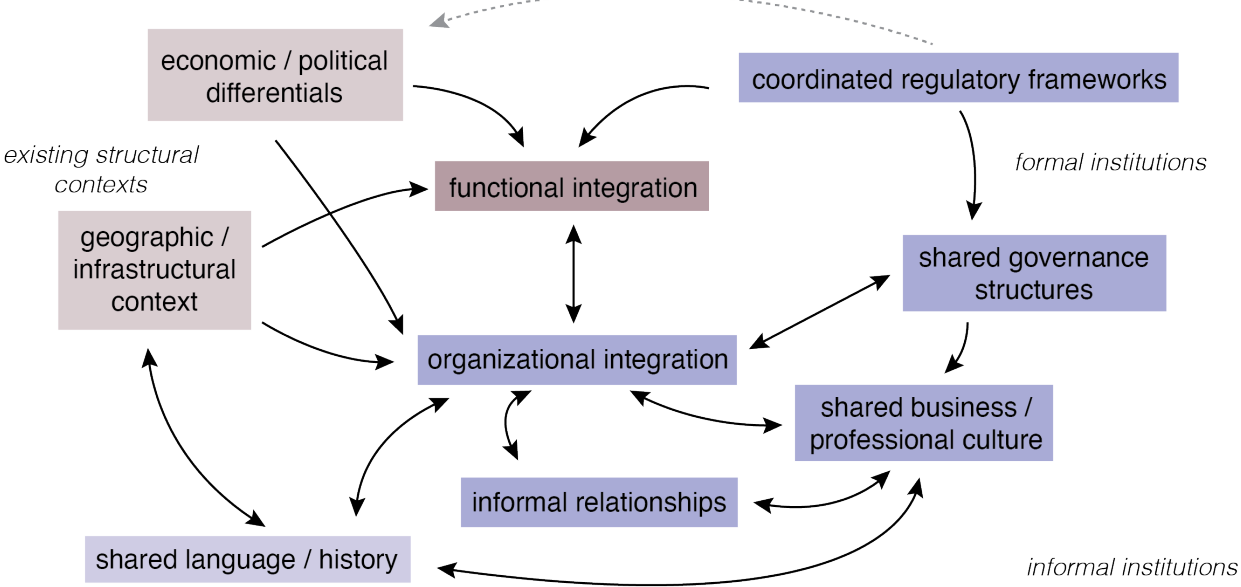
While the above typology represents mechanisms shaping the organizational-functional relationship, this research also finds that these mechanisms play out in an "arena" shaped by the presence of structural factors. I find that these structural factors have ongoing, complex, and mutually reinforcing relationships with one another (Figure 1D).

Disentangling drivers of integration from forms of integration is challenging. Structural elements like the geographic features and the presence of transportation and communication

infrastructure underpin relationships between regions and across borders. These elements affect both functional integration and the existence of informal institutions like cultural norms.

Similarly, the presence of economic differentials affects functional integration and organizational integration, which in turn mutually reinforce one another. Formal institutions intended to promote cross-border integration drive the integration of organizations, in part by facilitating the development of informal institutions like shared business and communication practices, and in part by directly facilitating connections between organizations. Both these formal and informal institutions also provide opportunities for the development of informal relationships, which then drive organizational integration.

**Figure 1D: Relationships between integrations and structural contexts**



Organizational integration thus bridges both formal and informal institutional integration, and encompasses the broader concept of ‘institution’ that is frequently overlooked in favor of studying more quantifiable formal institutions. Organizational integration can also reflect both “top-down” and “bottom-up” forms of cross-border integration. Formal cross-border structures provide top-down incentives and pathways for it, but domestic organizational interconnections also develop and persist outside of formal frameworks.

In particular, the study of organizational integration between domestic economic development organizations contributes to understanding of how integration processes interact with the presence of economic differentials in border regions. Economic development organizations are affected directly and indirectly by differentials. Most have mandates or incentives to engage with the threats and opportunities that differentials pose. As a result, organizational integration reflects organizations’ reactions – especially their perceptions of complementarities between themselves and their neighboring regions.

This chapter highlights organizational integration between domestic organizations and compares it to patterns of functional integration. I demonstrate that these patterns differ, and

provide evidence that organizations' strategy regarding economic differentials drives the differences. However, findings also emphasize that this takes place within unique regional contexts shaped by structural factors and influenced by informal institutions. Why does this matter? Economic development and cross-border cooperation are goals of both domestic and European policy respectively. Top-down policy directives with the broad objective of integration need examine not only the potential diversity in how regions approach integration, but also how their specific institutions and structural factors interact with different forms of integration. For domestic practitioners, understanding both their own situation and its potential complex interactions with their immediate international neighbors is also paramount. Policy and programs in pursuit of these objectives must recognize not only the presence of economic differentials and other structural factors, but also how multiple types of integration interact.

## Chapter Two POSITIONING

### **Powerhouse next door: How regions 'position' themselves versus dynamic neighboring regions in economic development strategies**

Regional economic development strategies often use the concept of “positioning” the region, though it is loosely defined. Broadly speaking, “positioning” involves distinguishing a region’s economy in relation to a context and developing corresponding strategies. For example, this could involve positioning the region within a global supply chain, as a specialized cluster within an industry, or within a political or economic hierarchy of urban areas (Kaufmann et al. 2016). Not every economic development strategy undertaken at the regional level is an attempt at “positioning,” but many are.

This chapter examines one particular form of positioning: spatial positioning between a region and an economically stronger adjacent region. Using a comparative case study of two regions, I explore the ways in which public economic development actors seek to spatially position their regions vis-à-vis stronger neighbors, and relate these strategies to theoretical models of interregional economic relationships. The chapter is guided by the following two research questions:

- What different strategies do public and public-private economic development actors use to attempt to position themselves relative to other regions, and why do they use them?
- What can these positioning strategies contribute to theories of how regions relate to economically stronger neighboring regions?

Findings indicate that public actors position their regions using strategies that both address disadvantages and capitalize on advantages presented by a strong neighboring region, often simultaneously. Although these strategies respond to different, and often contrasting, effects of strong regions on their neighbors, they don’t appear to conflict with one another. Different institutional contexts affect positioning strategies, as do physical and political geography. Drawing from the findings, I also clarify the definition of spatial positioning and offer a justification for it as a planning concept worthy of academic and policy attention.

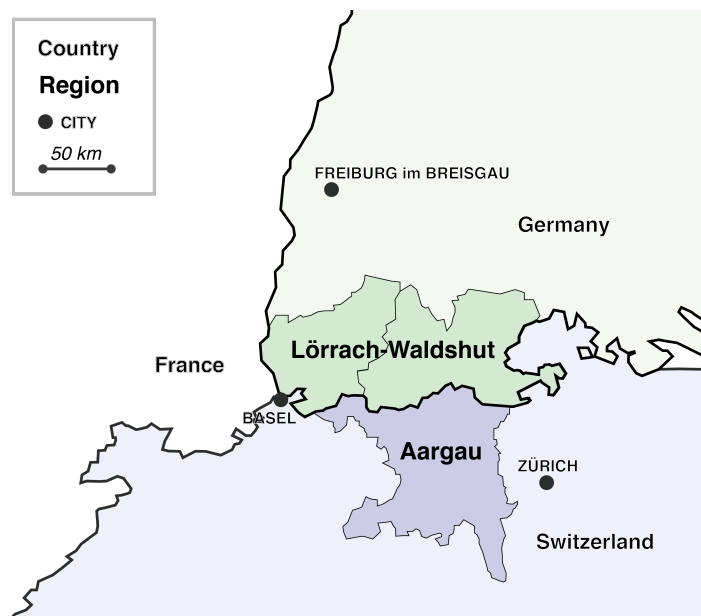
Theories in economic geography suggest that the proximity of an economically strong region could have multiple potential effects on adjacent regions. The strong region could provide advantages of agglomeration like infrastructure, labor pools, cultural resources, or other urbanization externalities, which nearby regions could leverage to achieve their own development goals. Conversely, strong regions can draw resources away from neighboring regions, attracting skilled labor, capital investment, entrepreneurial activity, and other key elements of economic development. Empirical evidence demonstrates the occurrence of both effects, but it is not yet clear what role is played by economic or institutional contexts, or by actor agency, in shaping development paths. It is also unclear which positioning strategies are used by economic actors under which conditions.

I investigate these questions via a comparative case study of two regions, the canton of Aargau in Switzerland and the districts of Lörrach and Waldshut in Germany, both of which border the economically dynamic region of Basel, Switzerland. This case design permits comparison of two distinct regional approaches to the same neighboring region, as well as

comparison of differing national institutional contexts that affect economic development planning.

Aargau and Lörrach-Waldshut's economic situations are typical of many regions in Western and Central Europe and North America. Both regions aspire to increase their innovative capacity as a strategy for maintaining economic competitiveness. Both are traditionally industrial strongholds with significant employment in the secondary sector who face the challenges of structural economic shifts away from traditional industry and towards services. Both host a branch of the regional university of applied sciences, and neither has a major metropolitan center or a research university. Both seek to increase their supply of skilled workers, particularly because young people and people with tertiary education are attracted by other larger metropolitan areas. In addition to their proximity to the Basel metropolitan area, Aargau is close to the Zürich metropolitan area (Switzerland) and Lörrach-Waldshut to Freiburg im Breisgau (Germany) (Figure 2A).

**Figure 2A: Aargau and Lörrach-Waldshut regions in the Upper Rhine**



Aargau and Lörrach-Waldshut serve as prototypical cases. They reflect challenges facing regions that are peripheral relative to major metropolitan areas, but are themselves neither remote nor small. Their economic challenges – namely coping with structural economic change to a more knowledge-intensive economy – are those faced by a majority of regions. Aargau reflects Switzerland's highly decentralized approach to local governance while Lörrach reflects Germany's relatively less decentralized system, broadening the applicability of findings and presenting an opportunity to compare the effects of two national contexts on economic development strategy.

Both the potential benefits and threats of a strong neighbor incentivize a specific spatial "positioning" response from economic development actors. What this policy response could or should be is an emerging area of study. The potential mechanisms and effects of smaller

regions “borrowing” advantages of agglomeration from larger neighbors, or of large regions “overshadowing” smaller neighbors, are still being untangled. Public and public-private economic development strategies have long been examined in the context of “place marketing,” but this approach generally does not look at effects of neighboring regions (and it examines the business and organizational management angle rather than an economic geography one.)

The chapter begins with a review of literature concerning interregional relationships. I then discuss spatial positioning as an economic development concept, and offer a definition. I outline the research methodology, including presenting a table of potential strategies for spatial positioning that reflect diverse theories of interregional relationships found in the literature. In the following section, I provide case studies of Aargau and Lörrach-Waldshut, examining their relationships to Basel and other neighboring regions based on (a) their economic development strategies as described in public plans and documents (b) their network ties with organizations in other regions and (c) interviews with representatives of public and public-private economic development actors. The concluding section of the chapter discusses findings from these case studies, connecting the strategies observed in the cases with the literature, and revisiting the definition of positioning.

This chapter does not evaluate whether the case regions’ strategies are effective or generate specific outcomes. Rather, it examines how the case regions’ strategies reflect theoretical ideas about inter-regional economic relationships in the arena of practice, and how they inform a theoretically and practically robust definition of the concept of positioning.

## **I. Context and literature**

A broad range of literature in economic geography, regional planning, and public policy theorizes potential effects of regional economies upon those of their neighboring regions. This section begins by identifying three fundamental elements underpinning interregional economic relationships. I then examine existing research pertaining to the question of how a region’s economy might be affected by an economically stronger neighboring region, identifying both potential advantages (opportunities) and potential disadvantages (threats). Following this, I propose a typology of possible positioning strategies that regions might choose in response to the threats and opportunities posed by stronger neighbors.

Three fundamental conditions established in literature provide a framework for examining interregional economic relationships. First, public entities can act as strategic agents with incentives to differentiate their geographies from others, including their immediate neighbors. Literature from public policy on fiscal federalism and metropolitan governance demonstrates that locally varying policy frameworks can affect those of other localities, and that policy actors can strategize to take advantage of this influence (Oates 1999; Ostrom et al. 1961; Lefevre and Weir 2012). For example, subnational jurisdictions compete with one another to attract residents or firms on the basis of price differentials in taxes, labor, land, infrastructure, and other factors (Atkinson 2015; Dawkins 2003).

Second, how a region is positioned within a broader spatial division of economic roles or functions can affect its development path. Research on trade linkages, value chains, and spatial divisions of labor demonstrates that regions host different economic functions (e.g. corporate



or financial headquarters, research and development, production), leading to a division of labor which can determine the region’s industrial profile and economic future (Massey 1979; Jacobs 1986; Sassen 1991; Gereffi et al. 2005). These approaches problematize political and economic power dynamics and power asymmetries that emerge from systems of organization and affect regions’ ability to influence their economic development outcomes.

Third, the physical proximity between two regions affects their relationship for two reasons. First, it is argued that physical proximity facilitates the exchange of tacit knowledge, and thereby facilitates learning processes and innovation (Maskell and Malmberg 1999; Asheim and Gertler 2005). Second, spatial agglomeration is theorized to have effects mediated by physical proximity. The theory of “agglomeration shadows” argues that growth in a region near a concentration of firms will be limited by competition effects, promoting divergence between the stronger region and its weaker, “shadow” region (Partridge et al. 2009). Conversely, the concept of “borrowed size” suggests that small cities can “borrow” the economic advantages of agglomeration from larger cities or from one another in polycentric areas (Alonso 1973; Meijers and Burger 2015).

The physical proximity of a stronger region presents both potential advantages and disadvantages for a region’s economic development. These advantages and disadvantages are summarized in Table 2A.

**Table 2A: Advantages and disadvantages of physical proximity to an economically stronger region**

<b>Advantages</b>	
Access to scale-dependent amenities	Physical infrastructure Cultural amenities Urbanization externalities
Advantageous similarities (relatedness)	Sectoral networks Localization externalities
Advantageous complementarities (relatedness, cost competition)	Sectoral networks Localization externalities Complementary assets Price differentials
<b>Disadvantages</b>	
Disadvantageous cumulative effects	Brain drain / youth exodus Agglomeration shadows
Disadvantageous similarities	Sectoral competition effects
Disadvantageous complementarities	Dependence / Structural lock-in Price differentials

A strong neighboring region could provide access to factors or amenities that require scale to support them. A weaker region could “borrow the advantages of size” from a neighboring region, gaining access to physical infrastructure like airports or rail transportation hubs, or to cultural, recreational, or educational amenities (Meijers and Burger 2015). The proximity of a

stronger region could also provide access to urbanization externalities, like larger markets for customers or suppliers, or larger pools of labor or investors (van der Panne 2004).

A strong neighboring region with industrial similarities could present opportunities for a weaker neighbor to diversify or strengthen its own economy by leveraging industry-specific knowledge resources, institutions, or physical assets. A region's ability to access new sources of knowledge (external to its own knowledge base) is argued to help prevent "lock-in" (Asheim and Isaksen 2002; Bathelt et al. 2004; Hassink 2005). Miguelez and Moreno (2018) find that similarity between a region's local knowledge and external knowledge accessed through networks or proximity promotes more innovation. Boschma, Martín and Minondo (2016) find that regions are more likely to develop new export industries in areas in which their neighbor regions are strong.

Complementarities between a region and a stronger neighbor could also be leveraged to benefit the weaker region. A study of European regions by Balland and Boschma (2021) finds that connections between regions with "complementary capabilities" increased the regions' probability of economic diversification. Empirical evidence provides some indications that the proximity of a stronger region could lend advantages. Gagliardi and Percoco (2017) found that rural areas located close to city centers were most successful at leveraging European Union structural funds to improve their economic performance, compared to other rural areas, urban or suburban areas. Relationships can also exploit complementarities of factors like land, infrastructure, regional knowledge base, or labor, including both cost and availability.

An economically-strong region can also be a threat to its weaker neighbors. The phenomenon of "brain drain," in which educated and highly-skilled workers leave less-developed countries for better opportunities elsewhere, is also observable at the regional level (Diamond 2016). Similarly, permanent out-migration of young residents from an economically lagging region can threaten its future economic sustainability (Farole et al. 2018). Economically dynamic regions can act as 'magnets' for skilled workers, younger residents, entrepreneurs, and capital investment, drawing these resources out of surrounding regions. In making recommendations for regional policy, McCann and Ortega-Argiles (2015) argue that networking between industries in peripheral regions and advanced regions must be done carefully to avoid inadvertently creating a shadow effect through which "the networking actually promotes further outflows of knowledge of skills" (1298).

Industrial or sectoral similarities between a region and a stronger neighbor can also be disadvantages. Strong industries or clusters can create spatial competition effects, also described as casting a "shadow" and preventing growth in those industries in an area surrounding the stronger region (Partridge et al. 2009; Krugman 1994a; Fujita and Mori 2005). As an example of how an agglomeration shadow might affect relationships between neighboring regions, Puga found in a quantitative analysis that peripheral regions in some parts of the European Union actually experienced more economic decline following the establishment of transit connections to dynamic regions (Puga 2002).

Likewise, economic complementarities between a strong region and its neighbor can function detrimentally for the weaker region. Although a strong region can provide a market for the weaker region's goods and services, it can also create relationships of economic dependency or "unbalanced" development. For example, Jacobs (1986) identified "imbalanced" relationships between urban regions. In her view, regions that specialized without also

diversifying (“supply regions”), and regions that hosted subsidiaries (“transplants”) without the subsidiaries integrating into local producer and supplier chains, failed to generate resilient growth and innovation because they depended wholly upon foreign markets and foreign imports (Jacobs 1986). Massey (1979) argued that some lagging regions’ inability to cope with global economic shift was not the result of internal characteristics, but rather attributable to their disadvantageous position in an extra-regional spatial division of labor. More recently, Los et al. (2016) examined this “unbundling” of functions and its effects at the regional level, finding that regions have become more interdependent. This literature does not explicitly investigate relationships between geographical neighbors, but the mechanisms driving these effects could apply to regional neighbors in all cases.

Both theoretical and empirical research thus propose different possible effects of an economically strong region on a weaker neighbor. However, it is not clear why or how different outcomes occur, or to what extent institutional contexts influence these outcomes. With the exception of the size borrowing and agglomeration shadow literature, the majority of this work does not study the effects of growth and agglomeration to adjacent regions. Most relevant to this chapter, it is also still unclear how actors attempt to influence these relationships, or whether their attempts reflect to the theories described above.

In practice, do existing theories of interregional economic relationships emerge in economic development practice, either explicitly or implicitly? When regional actors attempt to position their regions in relation to their stronger neighbors, what strategies do they use and how do these correspond with the above understandings of potential mechanisms shaping interregional relationships?

Drawing from the potential advantages and disadvantages outlined in Table 2A, Table 2B proposes a typology of potential approaches and corresponding strategies for a region to geographically position itself vis-à-vis a stronger neighboring region.

**Table 2B: Strategies and corresponding mechanisms identified in literature**

<b>Strategies</b>	<b>Mechanism(s)</b>
<i>Positioning on the basis of factor cost differentials</i>	
Establishing and promoting different tax regimes	Promote advantageous complementarities, leverage access to scale-dependent amenities
Promoting differences in land, labor, or housing costs to firms or individuals, or establishing programs or policies to provide below-market factor prices	Promote advantageous complementarities, leverage access to scale-dependent amenities
<i>Positioning on the basis of sectoral/industrial characteristics of neighbor region</i>	
Promote sectoral similarities	Promote advantageous similarities, leverage access to scale-dependent amenities
Promote sectoral complementarities	Promote advantageous complementarities
Promote sectoral complementarities or sectoral diversification	Avoid disadvantageous similarities or cumulative effects

<i>Positioning on the basis of connectivity, collaborations or cooperation</i>	
Resource pooling with neighbors (to achieve scale)	Avoid disadvantageous cumulative effects
Establishing connections or collaborations with external institutions	Avoid disadvantageous cumulative effects
Developing and maintaining physical connectivity with regional infrastructure	Avoid disadvantageous cumulative effects

## II. Methodology

The case studies examine economic development strategies created by a subset of organizational actors – those tasked with representing the public interest, either wholly or partially, in regional or subregional economic development in the Swiss canton of Aargau and the German districts of Lörrach and Waldshut (referred to hereafter as “Lörrach-Waldshut”). These include public economic development agencies, public-private economic development corporations, and regional planning associations.

I used three strategies to identify and qualify actors’ attempts at positioning the case regions vis-à-vis their neighbors. First, I conducted a document analysis of economic strategies and plans and public-facing outreach materials produced between 2015 and 2020 by a set of 20 public and public-private actors responsible for regional and local economic development in Aargau and Lörrach-Waldshut. This timeframe is intended to capture a relative “snapshot” in economic development planning, avoiding plans written during or after the COVID-19 pandemic or in the first years following the 2008 financial crisis. I first developed a set of codes reflecting the mechanisms and theories identified in the literature and coded the documents based on this set (see Table 2A). During this initial coding process, I identified additional themes based on frequency, edited the original coding schema to reflect these themes, and recoded the documents. This analysis provides an outline of strategies used by actors in published plans and materials that reflect theoretical explanations and predictions of the relationship between a region and a stronger neighboring region.

Second, I examined regional institutional networks and compared how a broader set of economic development organizations in the case regions link to non-firm organizations in their neighboring regions. I used a social network analysis of public, private, and nonprofit entities engaged in economic development activities, consisting of 37 organizations in Aargau and 24 in Lörrach-Waldshut. In addition to public and public-private economic development agencies, these include organizations that advocate for industry or trade at the sub-national level, organizations that provide support for small businesses or entrepreneurs, universities and research institutions, and technology transfer organizations. Links between organizations represent partnerships, defined here as a variety of relationships: founders, organization members, sponsors, partners in general or project-specific aims, and interlocking directorates (shared members on governing boards). The network data was compiled using web-scraping of publicly provided data from organizations’ websites, and roster-recall methods from survey and interview contacts. The social network analysis contributes data on interregional linkages, shedding light on the role that networks might play as a positioning strategy.

Finally, I used data from 15 semi-structured interviews with representatives of the institutional actors that produced the economic development strategies and participated in the social network analysis. All actors in the network were invited to participate in expert interviews, which were conducted in person, via videoconferencing, or over the telephone. Interviews were between 35 and 90 minutes in duration and were conducted in German or English. Interview data was coded using the same procedure to analyze documents. Semi-structured interviews permitted questions about how strategies, collaborations, and interregional network links were formed, and how they represent or influence actors' attempts to position their region relative to its neighbor(s).

### III. Case regions

#### A. Geographic and economic positions

Both Aargau and Lörrach-Waldshut are smaller regions located in the Upper Rhine megaregion, which includes parts of northwestern Switzerland, southwestern Germany, and northeastern France. Both Aargau and Lörrach-Waldshut host medium-sized cities as well as very rural regions. Aargau's main cities are dispersed geographically across the canton and are similar in size while Lörrach-Waldshut's population centers primarily cluster along the border with Switzerland.

**Figure 2B: Canton Aargau largest municipalities and adjacent regions**



**Table 2C: Canton Aargau largest municipalities**

	Population (2020)	Travel time (train) to Basel	Travel time (train) to Zürich
Aarau (Aarau)	<b>21,726</b>	<b>0:45</b>	<b>0:30</b>
Wettingen (Baden)	<b>21,099</b>	<b>1:07</b>	<b>0:25</b>
Baden (Baden)	<b>19,621</b>	<b>0:52</b>	<b>0:28</b>
Wohlen (Oberes Freiamt)	<b>16,881</b>	<b>1:04</b>	<b>0:35</b>
Oftringen (Zofingen)	<b>14,455</b>	<b>0:46</b>	<b>0:46</b>
Rheinfelden (Fricktal)	<b>13,551</b>	<b>0:22</b>	<b>0:59</b>

Brugg (Brugg)	<b>12,738</b>	<b>0:43</b>	<b>0:29</b>
Spreitenbach (Baden)	<b>12,126</b>	<b>1:15</b>	<b>0:22</b>
Zofingen (Zofingen)	<b>12,104</b>	<b>0:44</b>	<b>0:44</b>
Möhlly (Fricktal)	<b>11,088</b>	<b>0:24</b>	<b>1:04</b>

**Figure 2C: Lörrach-Waldshut largest municipalities and adjacent regions**



**Table 2D: Lörrach-Waldshut largest municipalities**

	Population	Travel time (train) to Basel	Travel time (train) to Freiburg
Lörrach (Lörrach)	<b>49,295</b>	<b>0:19</b>	<b>0:54</b>
Rheinfeldern (Lörrach)	<b>32,919</b>	<b>0:24</b>	<b>0:57</b>
Weil am Rhein (Lörrach)	<b>30,009</b>	<b>0:17</b>	<b>0:36</b>
Waldshut-Tiengen (Waldshut)	<b>24,067</b>	<b>0:52</b>	<b>1:24</b>
Schöpfheim (Lörrach)	<b>19,763</b>	<b>0:35</b>	<b>1:13</b>
Bad Säckingen (Waldshut)	<b>17,510</b>	<b>0:36</b>	<b>1:09</b>
Grenzach-Wyhlen (Lörrach)	<b>14,897</b>	<b>0:28</b>	<b>1:13</b>
Wehr (Lörrach)	<b>13,140</b>	<b>n/a</b>	<b>n/a (1:16)</b>
Steinen (Lörrach)	<b>9,999</b>	<b>0:27</b>	<b>1:03</b>
Laufenburg (Waldshut)	<b>9,018</b>	<b>0:49</b>	<b>1:28</b>

Aargau and Lörrach-Waldshut are centrally located between major metropolitan areas. Aargau's largest municipalities are all within 45 minutes of the Basel or Zürich metropolitan areas via public transit, while the majority of the largest municipalities in Lörrach-Waldshut are within 35 minutes of Basel. Aargau and Lörrach-Waldshut both partially border the two cantons of Basel-Stadt and Basel-Landschaft.

Economically, Basel-Stadt (and to a lesser extent Basel-Landschaft) is one of the most dynamic regions in Switzerland and in Europe. In 2019, Basel-Stadt's GDP per capita was CHF200,675, the highest of all the Swiss cantons and more than double the country's GDP per capita of CHF84,803. Between 2010 and 2018, GDP per capita in Basel-Stadt grew 21.8 percent (BFS 2020a). In 2021 indices of "location quality" or "competitiveness" indicators produced by Swiss financial institutions Credit Suisse and UBS, Basel-Stadt ranks second among Swiss cantons (Credit Suisse 2021; UBS 2021).

While the City of Basel's population is relatively small, it is home to two major international pharmaceutical firms, Novartis and F. Hoffmann-La Roche (Roche), and has a global reputation as a life sciences cluster. The two Basel cantons have an extremely high location quotient (LQ)<sup>9</sup> for the pharmaceutical manufacturing industry, in part because both Novartis and Roche file financial statements under this code<sup>10</sup> even though their Basel operations include headquarters and research facilities (Table 2F). The industry category "Research and development" has the second highest LQ for the Basel cantons. In addition to its life sciences employment, Basel also has considerable logistics operations due to the presence of the Rhine river port and the Basel-Mulhouse airport.

Lörrach-Waldshut's economy is characterized by its proximity to Swiss markets, workers, and consumers. Wages are significantly higher in Switzerland than in Southern Germany and housing and consumer goods are significantly cheaper in Germany, incentivizing cross-border out-commuting from Lörrach-Waldshut and shopping tourism from Switzerland. Manufacturing industries have a very high concentration in Lörrach-Waldshut in comparison to the Basel cantons, to Germany as a whole, and even to Canton Aargau, which has itself a high concentration of manufacturing. In addition to a high concentration of employment in trade, Lörrach-Waldshut has an LQ of 1.96 in manufacturing industries for consumer goods (reference region Germany). 37.8 percent of total employment in Lörrach-Waldshut is in the secondary sector (Table 2E).

Aargau also has a high proportion of its employment in the secondary sector (27.4 percent), particularly when compared to the Basel cantons (22.1 percent) and to Switzerland as a whole (20.8 percent). Aargau's three highest LQs represent electronics manufacturing, pharmaceutical manufacturing, and energy production (Table 2F).

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<sup>9</sup> Here, the LQs reflect the ratio of an industry's share of employment in a region (Aargau or Lörrach-Waldshut) to the industry's share of employment in the nation (Switzerland or Germany, respectively).

<sup>10</sup> Bureau van Dijk. (2020). ORBIS.

**Table 2E: Employment by Sector**

Sector of employment	Basel-Stadt and Basel-Land	Aargau	Lörrach-Waldshut
Primary	0.9%	2.9%	0.5%
Secondary	22.1%	27.4%	37.8%
Tertiary	77.0%	69.6%	61.7%

**Sources:** Switzerland: Bundesamt für Statistik. STATENT 2005 - 2018, Beschäftigte und Vollzeitäquivalente nach Wirtschaftszweigen (NOGA BFS-50) auf Ebene Arbeitsstätten und nach Kantonen. Germany: Bundesagentur für Arbeit, Statistik. Socialversicherungspflichtig Beschäftigte nach Wirtschaftszweigen der WZ 2008 und ausgewählten Merkmalen. Dec. 2018.

**Table 2F: Top Location Quotients for each region, 2018**

NOGA/NACE code	Industry name	LQ
Basel-Stadt / Basel-Land		
21	Manufacture of pharmaceuticals	7.30
72	Research and development	2.75
50, 51	Water and air transportation	2.12
Aargau		
27	Manufacture of electronic equipment	3.39
21	Manufacture of pharmaceuticals	2.28
35	Energy production	2.10
Lörrach-Waldshut		
C10-15, 18, 21, 31	Manufacture of household consumer goods	1.96
I	Accommodation and food service	1.40
G	Wholesale and resale trade, maintenance, repair of motor vehicles	1.29

**Sources:** Switzerland: Bundesamt für Statistik. STATENT 2005 - 2018, Beschäftigte und Vollzeitäquivalente nach Wirtschaftszweigen (NOGA BFS-50) auf Ebene Arbeitsstätten und nach Kantonen. Germany: Bundesagentur für Arbeit, Statistik. Socialversicherungspflichtig Beschäftigte nach Wirtschaftszweigen der WZ 2008 und ausgewählten Merkmalen. Dec. 2018.

Both Aargau and Lörrach-Waldshut consider a shortage of skilled workers to be a major challenge for their regional economic development. This is reflected in current planning documents, and was mentioned by representatives of public regional economic development agencies (2020, 2022 interviews).

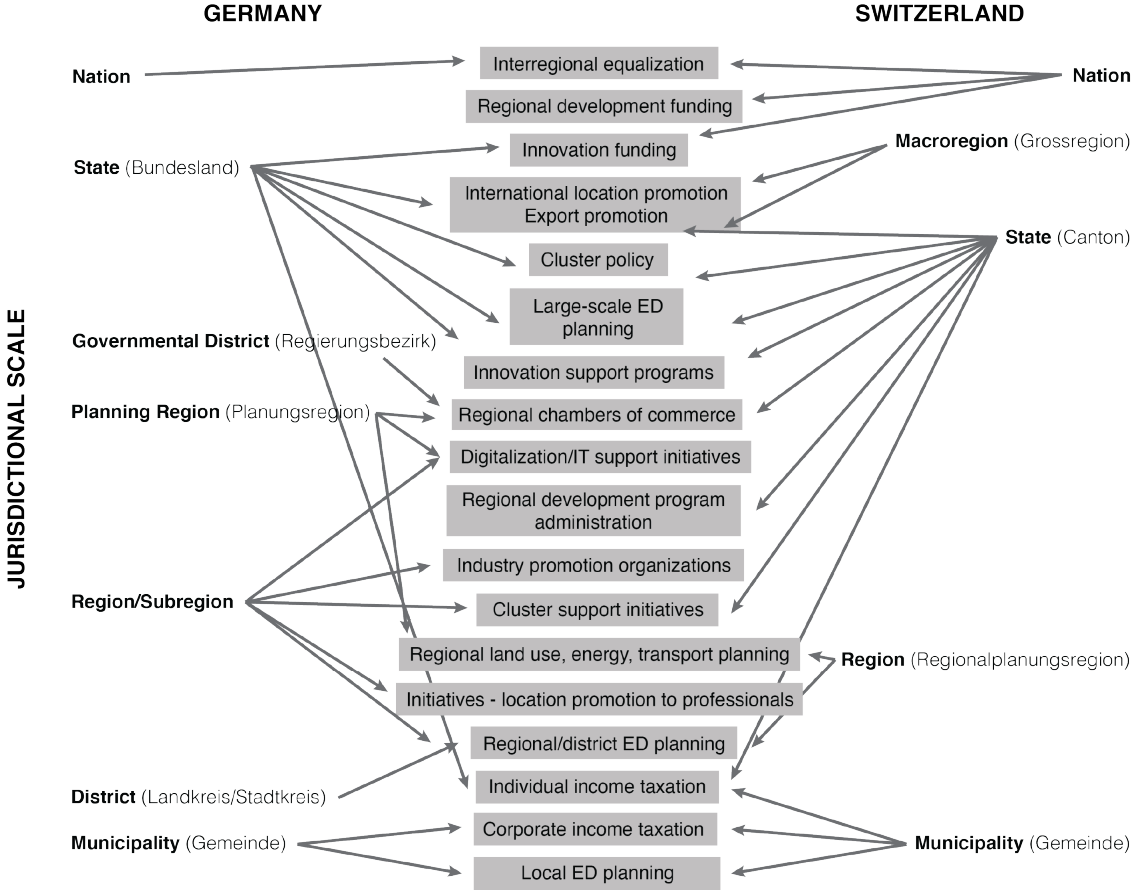
## B. Economic development planning and governance

Both Germany and Switzerland are federal states in which regional and local economic development activities are managed at multiple subnational levels. Similar actors are active in both countries' institutional arrays, with public government agencies at the state, regional and local levels, regional public-private partnerships, chambers of commerce, and interest-focused initiatives or associations participating in local and regional economic development strategies



(Figure 2D). Of note, Switzerland is a significantly smaller country in both population and land area, so its geographic scales of government do not always provide an equivalent comparison for German scales of government. Swiss cantons are much smaller than German Bundesländer, so while they occupy a similar level of authority/responsibilities in some aspects (e.g. representation in federal politics, authority for equalization/redistribution policy), they are not comparable in others (e.g. regional land use and economic development planning, export promotion, interest group associations).

**Figure 2D: Economic development functions, actors, and initiatives at jurisdictional scales in Germany and Switzerland**



*This figure is a simplification of a complex array of responsibilities that take place at different geographic and jurisdictional scales. Scales at which activities take place or actors are active are not comprehensive (e.g., cluster support initiatives make take place at a number of different scales not identified here). Rather, the figure identifies the scales at which these actions primarily take place.*

In both countries, economic development planning is undertaken at the state (Bundesland or cantonal) level and is optional for regions and localities. A key distinction between the two is the significantly greater amount of local authority for taxation in Switzerland. Switzerland is one of the most fiscally decentralized OECD countries, allowing cantons to determine wealth and personal and corporate income tax rates and to grant taxation powers to municipalities

(Kaufmann et al. 2016; UCLG and OECD 2016). The inclusion of wealth and personal income tax rates under (many) Swiss municipalities' authority allows municipalities to compete to attract individuals in addition to firms as an element of their tax base. German municipalities also set their own corporate tax rates.

Economic development activities undertaken in the public interest in Lörrach-Waldshut are conducted by administrative departments in cities and large villages, and by public entities organized as GmbHs<sup>11</sup> with limited private partnership and full public ownership. The largest of these, Wirtschaftsregion Südwest (WSW), coordinates economic development for both Lörrach and Waldshut districts as a comprehensive region. The regional chamber of commerce, IHK Hochrhein-Bodensee, represents firms in the Lörrach and Waldshut districts as well as the district to the east, Konstanz. Unlike Swiss chambers of commerce, the German IHKs are required to represent and service all firms in their service area as members regardless of whether they pay membership dues.

At the cantonal level, Aargau produces a 10-year development strategy that covers cantonal taxation and public finance, education and training, innovation funding, and sustainability and resources. Additional economic development planning responsibilities are devolved to 12 regional planning agencies, organized as associations of municipal governments (Figure 2E). The 12 planning agencies have more flexibility and specificity in the tasks they choose to undertake, with several of the more rural sub-regions choosing to engage in very limited economic development planning or none at all. A chamber of commerce, the Aargauischer Industrie- und Handelskammer (AIHK) is organized at the cantonal level, with subregional chapters.

**Figure 2E: Aargau Regional Planning Associations**



<sup>11</sup> Similar to a US limited liability corporation.

#### **IV. Positioning strategies in Aargau and Lörrach-Waldshut**

Public and public-private economic development actors in Aargau and Lörrach-Waldshut use a range of strategies to position their regions favorably for growth with regard to their more economically dynamic neighbors. The following section groups strategies under four broad themes, but these themes often overlap. It concludes with a description of some economic strategies that do not represent “positioning.”

##### **A. Positioning strategies based on exploiting factor differentials**

Both Aargau and Lörrach-Waldshut (and/or the subregional actors within them) attempt to position their regions vis-à-vis Basel and Zürich by exploiting differentials in costs. As the differentials themselves are different, the strategies also vary.

Differences between Swiss and German salaries and costs of living are pronounced, and these differences have a significant impact on patterns of economic development in the Lörrach-Waldshut region as well as on economic development strategy. The median monthly salary in Northwest Switzerland in 2020 was CHF 6789 (€6679), while the median monthly salary was €3588 in Lörrach and €3302 in Waldshut at the end of 2019 (BFS 2020b; BFA 2019). These differences generate large cross-border flows of commuters from Lörrach-Waldshut to the Swiss cantons of Basel-Stadt, Basel-Land, Aargau, and to a lesser extent Zürich. In 2018, approximately 35,590 people commuted from Lörrach and Waldshut into Switzerland (WSW 2019).

Economic development actors in Lörrach-Waldshut at the local and regional level emphasize these differentials as an opportunity for both businesses and professionals in public-facing location promotion materials. The City of Lörrach’s economic development agencies advertises “full employment and a noticeable wage gap with Switzerland” as well as both “attractive framework conditions for German professionals in Switzerland” (referring to low costs of living in Lörrach) and “attractive framework conditions for customers from Switzerland” (referring to lower consumer prices and the proximity of Swiss consumer markets) (WFL Lörrach, n.d.). A report commissioned by Wirtschaftsregion Südwest on the topic of innovation in Lörrach and Waldshut cites local experts’ consideration of the Swiss border’s proximity as an advantage, noting that it provides a stable market, a central location for logistics, and that southwestern Germany has a favorable standard of living compared to Switzerland (WSW 2020).

Factor differentials between Aargau and its neighboring regions are less pronounced, though both incomes and costs of living are lower in Aargau than in the Basel cantons or Canton Zürich (Table 2G). Greater availability (and greater diversity) of industrial land, as well as lower prices for office and industrial space, were cited by a representative of the cantonal economic development agency as advantages for Aargau versus Basel or Zürich. Multiple regional planning associations’ economic development strategies and outreach materials also promoted the lower costs and greater availability of industrial land, business premises, and residential housing.

**Table 2G: Mean incomes (2016) and median rental prices (2020) for selected Swiss cantons**

Canton	Mean annual income	Median monthly rental costs
Zürich	CHF 90,817	CHF 1,661
Basel-Land	CHF 88,827	CHF 1,458
Basel-Stadt	CHF 85,343	CHF 1,447
Aargau	CHF 81,012	CHF 1,431

*Source: ESTV, Direkte Bundessteuer / Natürliche Personen, 2016; BFS, Durchschnittlicher Mietpreis in Franken nach Kantonen, 2020 (Strukturerhebung Gebäude- und Wohnungsstatistik).*

*Median rental price for a 3 to 4 room apartment.*

Aargau's cantonal development plan particularly emphasizes the importance of low corporate taxes (in comparison to neighbors) as a strategy for attracting and stimulating firms. Similar to the cantonal-level plan, the regional planning agencies bordering metropolitan Basel or Zürich (including Fricktal, Brugg and Baden), emphasized comparatively favorable corporate and personal tax conditions vis-à-vis their neighbors, as an appealing factor for both firms and individuals.

## **B. Positioning strategies based on complementarities**

Both Aargau and Lörrach-Waldshut also attempt to exploit economic complementarities with their economically stronger neighbors. These include sectoral or industrial complementarities as well as regulatory complementarities.

Aargau's fastest-growing subregion is Fricktal, which is located in the northeast of the canton and borders both Germany and the Basel cantons. Fricktal's growth is largely due to its successful life sciences industry and related employment in logistics. Life sciences firms from Basel have sited production in Fricktal since approximately the 1960s; in the past decade, some have moved additional functions (research, education, services, information technology) to Fricktal as well (2022, interview). Fricktal also has high employment in logistics due to a combination of factors: demand generated from the greater life sciences cluster in Basel, demand generated from the proximity of the border, and the availability of sufficient industrial space (2022, interview). These two successful clusters depend upon demand for space and services from Basel's life sciences cluster, and Fricktal's complementary assets of a manufacturing workforce and industrial land (2021, 2022, interviews).

Fricktal's regional economic development plan states explicitly that it is difficult for the local service sector to develop as a cluster due to the proximity with Basel's stronger service sector. Therefore, the service sector is only to be supported insofar as they are needed to provide for the regional economy, and not encouraged as an export cluster (Fricktal Regio 2007).

Aargau as a whole is attempting to promote itself as the "high-tech canton."<sup>12</sup> Still a highly industrialized canton, Aargau lacks some classic indicators of high-tech success like high startup rates and highly-qualified workers, and it lacks common high-tech support infrastructure like research universities (Credit Suisse 2021). Yet Aargau is home to one major Swiss research institution, the Paul Scherrer Institute, as well as several industry-based research centers,

<sup>12</sup> E.g. SME Organics: INTERREG Europe "Organic Action Plan for Aargau 2021" <projects2014-2020.interregeurope.eu>; 'Über uns: Aargau Services Standortförderung' <ag.ch/de/verwaltung/dvi/wirtschaft-arbeit/aargau-services-standortfoerderung>

including the ABB Lernzentrum and ANAXAM. Patent applications are relatively high (Credit Suisse 2021). The canton funds an innovation support center, the Hightech Zentrum Aargau, which provides both sectorally-targeted and general innovation support, primarily to established small and medium industrial firms (as opposed to a focus on startups).

Representatives from the Hightech Zentrum Aargau and from the Aargau cantonal economic development agency stated that they believed Aargau is most attractive to firms expanding their production or innovating in production processes (2021, 2022, interviews). They acknowledged that Aargau might not be able to compete for or generate the type of startup activity occurring in Zürich or Basel (particularly university-based startups), but that it filled a particular niche for innovative firms looking to scale up. These comments alluded to a product or process cycle concept, in which Aargau could capture firms at the scale-up stage, because the canton's industrial infrastructure, availability of industrial and office spaces, and industrial know-how differentiated it from the more metropolitan Basel and Zürich areas.

Economic development strategies from Lörrach and Waldshut's public and public-private agencies position the region toward the Swiss economy (and particularly toward Basel). An older plan cited in recent planning documents states that Lörrach's proximity to the Swiss pharmaceutical industry gives it the opportunity to "build on its strengths" to "enable synergies between research and development companies and manufacturing and processing companies" (Oberzentrum Lörrach-Weil am Rhein, 2005). This foundational goal leverages complementarities between Lörrach's manufacturing-focused industrial workforce and infrastructure and Basel's research-intensive life sciences cluster. A lack of industrial or production space in the Basel cantons has been an ongoing challenge for at least the past decade (2020, interview).

Regulatory complementarity, or leveraging regulatory differences created by the presence of the border, is a strategic approach from cities in Lörrach and Waldshut. Representatives from regional and municipal economic development agencies and from the IHK noted that firms frequently maintain locations on each side of the German-Swiss border in order to take advantage of the two distinct regulatory environments (2020, interviews). Some firms require a location in the European Union while also wanting to maintain a footprint in Switzerland; a representative from the City of Lörrach noted that this opportunity was an advantage they could offer to potential new firms (2020, interview). A similar situation takes place in Bad Säckingen, with larger Swiss firms siting a location immediately across the border in Germany and creating ties between the economy in Lörrach-Waldshut and the Swiss economy (2020, interview).

### **C. Positioning strategies based on physical connectivity**

For actors in Aargau and Lörrach-Waldshut, promoting and preserving their physical proximity and connectivity to economically dynamic neighboring regions is the most commonly and most frequently mentioned strategy in economic development documents. Connectivity was mentioned by stakeholders as an advantage and its maintenance as a priority. In public outreach materials, the connectivity to the regions themselves (Basel, Zürich, and to a lesser extent Freiburg) is highlighted as an opportunity for firms to benefit from perceived agglomeration economies by accessing knowledge, markets, and key infrastructure, as well as for individuals to access cultural amenities.

Economic development agencies for the Lörrach-Waldshut region and for the major cities in Lörrach-Waldshut all cite their location in the “Dreiländereck” (trinational border triangle) as advantageous due to the proximity with Basel. As an example, the city of Rheinfelden, Germany, describes its location as a “first-class location in the Dreiländereck with close proximity to the economic dynamism of the Basel region and northwest Switzerland” (WST Rheinfelden, n.d.). Multiple actors emphasize their proximity to Swiss airports in Basel and Zürich, the rail hub of Basel, and the container shipping infrastructure of the Swiss port on the Rhine river.

The majority of Aargau’s regional planning associations both highlight the connectivity of their region in outward-facing promotional materials and prioritize maintaining connectivity in their regional economic development plans. In an interview with a representative of Baden’s regional planning association, maintaining and expanding rail, bus and bicycle connectivity to the Zürich area was a core challenge and of high priority.

#### **D. Positioning strategies based on network connectivity**

Actors in Aargau and Lörrach-Waldshut, and in the smaller subregions and cities within them, develop and participate in regional and macroregional networks. Some of these network ties are explicitly part of positioning strategies, whereas others reflect less-intentional geographic alignments between regions.

Aargau’s cantonal economic development agency has partnered with both the Basel cantons and with Canton Zürich on economic development planning and/or location promotion in the past, but currently is not part of a formal collaboration at the cantonal level. In the 2000s, Aargau collaborated with Basel-Stadt and Basel-Land on a joint four-year economic development plan, but subsequently left this partnership and now engages in its economic development planning independently (2020, interview). In the early 2010s, Aargau also participated in the Greater Zürich Area (GZA), a public-private metropolitan economic planning area tasked with marketing the region internationally. Canton Aargau left GZA in 2014 and is to date one of the only Swiss cantons not affiliated with a metropolitan economic planning area.

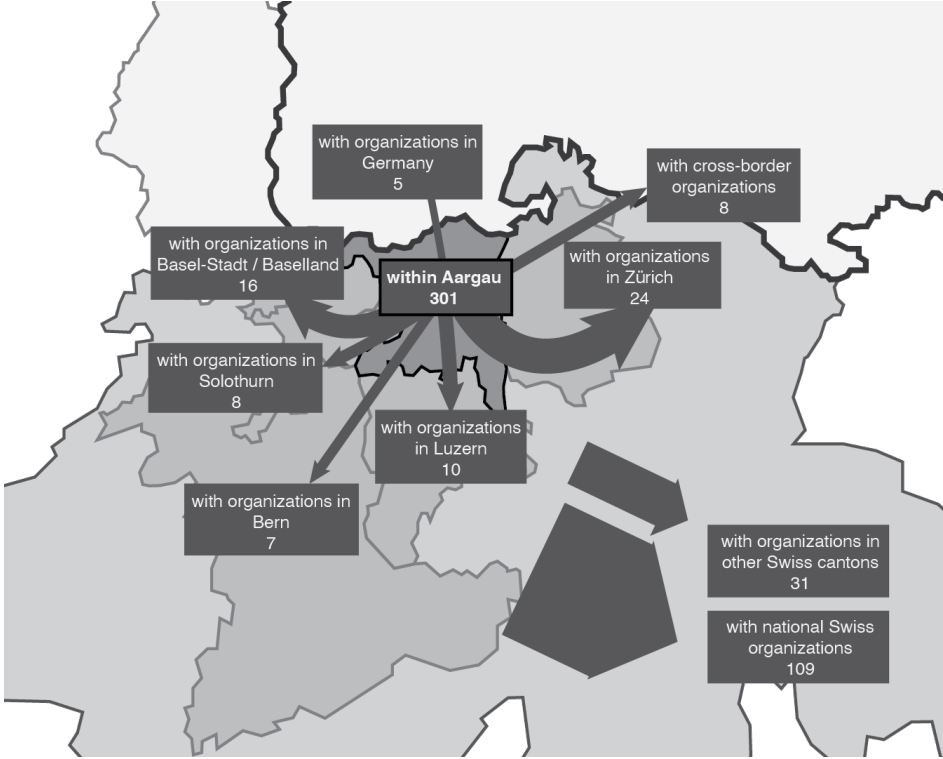
Actors cited multiple reasons for Aargau’s independence in this area. First, Aargau as a whole does not have one single stronger orientation toward either Basel or Zürich. While Fricktal has a strong orientation toward Basel, and Brugg and Baden a strong orientation toward Zürich, other regions have weaker connections or are connected with multiple metropolitan areas outside of Aargau (2021, 2022, interviews). In addition, the economic development associations in Basel and Zürich focus on the key industries and clusters within the core cities; for example, upon promoting Basel’s pharmaceutical sector. Though neighboring regions in Aargau have complementary and even similar industrial profiles, bolstering Basel’s specific cluster may or may not have sufficient positive effects for Fricktal to justify Canton Aargau’s participation (2021, interview).

Second, a representative of the Aargau cantonal economic development department stated that Aargau is still exploring whether and with whom to align itself for international location promotion. Previous partnerships with BaselArea and GZA were cut short by political decision-makers due to financial year concerns, yet this representative stated that the overall timespan for these partnerships was too short to see whether there were any benefits to Aargau. Among

concerns being considered is whether these collaborations focus on clusters or strategies that are also of interest to Aargau (2022, interview).

Network data for Aargau shows that the canton’s economic development actors as a group have more orientation toward Zürich than Basel, but institutional connections vary by region (Figure 2F). As an example, Fricktal participates in four Basel-based organizations, three of which focus on cross-border topics, as well as an additional cross-border organization based in Waldshut. Baden participates in none of these, but is active in the Metropolitantkonferenz Zürich, a regional planning and governance collaboration for the greater Zürich region, as well as planning projects along the Limmattal, a river corridor between Baden and Zürich covering portions of Cantons Aargau and Zürich.

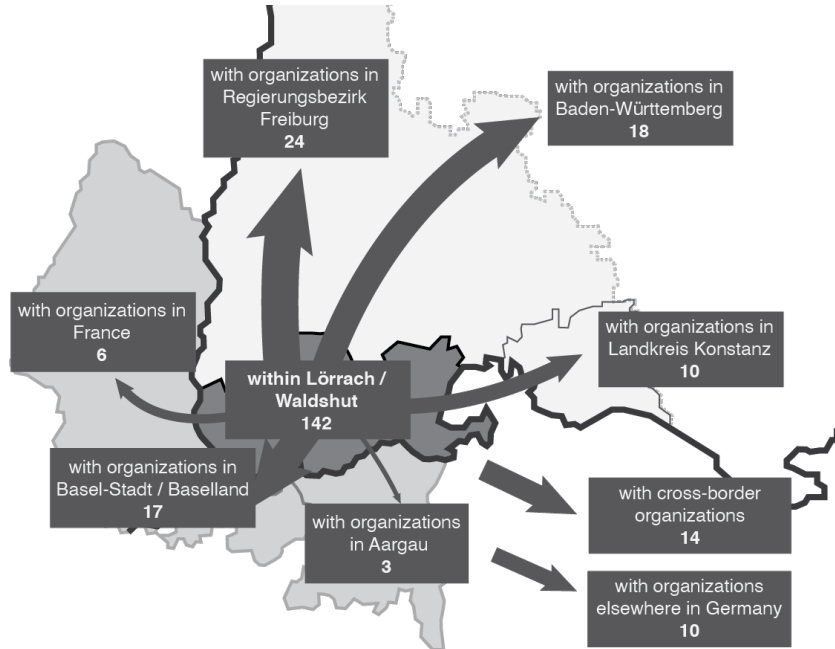
**Figure 2F: Network connections between Aargau’s economic development organizations and non-firm organizations**



Lörrach-Waldshut participates in cross-border networks and has ties to all the cross-border organizations in the Basel area. As per representatives from municipal and regional economic development agencies, cross-border cooperation is essential in order to provide and maintain infrastructure connecting Lörrach-Waldshut with the Basel area as well as the rest of the Upper Rhine trinational region (2020, 2021, 2022, interviews). In addition to network connections with actors in Switzerland, the Lörrach-Waldshut actors are closely connected to regional actors in the greater Freiburg district and macroregional actors representing Baden-Württemberg. There are fewer connections between Lörrach-Waldshut actors and French actors, but in comparison

to Aargau, Lörrach-Waldshut’s actors have thick networks across international borders (Figure 2G).

**Figure 2G: Network connections between Lörrach-Waldshut’s economic development organizations and non-firm organizations**



Finally, planning documents from Lörrach-Waldshut set “intensifying regional cooperation” as an objective for economic development policy. The Lörrach municipality commercial/industrial land use plan argues that firms are increasingly evaluating regions, rather than the specific municipality or locality, when they make a location decision (WFL Lörrach 2017). Given Lörrach’s limited land availability, the plan states that public actors will need to “think in regional dimensions” in future economic development planning.

This regional perspective already exists in network connections. Network data shows that Lörrach-Waldshut’s economic development actors have close internal connections with one another; this data was corroborated with interview data. Representatives of municipal and regional economic development agencies in Lörrach and Waldshut reported frequent and collegial exchange with one another, both at regularly organized meetings and through informal contact (2020, interviews).

Although Lörrach-Waldshut’s relationship to Switzerland and Basel is mentioned more prominently in outreach materials and plans, extensive network connections and collaborations also link the region with Freiburg im Breisgau and with the greater Freiburg Regierungsbezirk region. This thickness of connections with Freiburg is partially due to jurisdictional scales – Lörrach-Waldshut is part of the Freiburg Regierungsbezirk’s service area, and certain economic development agencies at this level have their headquarters in Freiburg im Breisgau. Some is due to individual relationships – per the director of Lörrach-Waldshut’s regional economic development agency WSW, they currently collaborate extensively with Freiburg-based actors because of motivated individuals working for these organizations (2020, interview).



## V. Discussion

How do positioning strategies in Aargau and Lörrach-Waldshut reflect theories about how regions relate to stronger neighbors? Actors in both Aargau and Lörrach-Waldshut use strategies to position themselves in relation to their more economically powerful neighbors of Basel, Zürich, and to a lesser extent Freiburg im Breisgau. These strategies reflect a diversity of theories of how two neighboring regions can relate to one another economically.

Traditional factor cost competition and tax competition are common strategies for actors in both Aargau and Lörrach-Waldshut as they position themselves in relation to stronger neighbors in Basel and Zürich. Both have planning and outreach language targeting firms and targeting individuals. Canton Aargau and its planning regions particularly emphasize differentials in tax burdens (both corporate and individual), and differentials in the cost and availability of industrial land. In Lörrach-Waldshut, differences in salaries (versus Switzerland and Basel) are highlighted to firms, and differences in costs of living are highlighted to individuals. In planning documents or outreach materials, there is little or no reference to cost competition with neighboring municipalities or localities; rather, the comparisons are made versus larger neighboring regions with more dynamic economies.

Potential effects of agglomeration shadows are tacitly mentioned in some regional positioning strategies. Most explicit among these is the Fricktal regional planning association's strategy to avoid encouraging the service sector as an export industry and confine support only to the levels needed to provide services to the local economy. The Fricktal development plan is clear that Fricktal cannot successfully compete with Basel's more-developed service sector in such close proximity.

More tacit are acknowledgments from stakeholders that Aargau and/or Lörrach-Waldshut are unlikely to create or capture the same firms as Basel or Zürich, particularly young university-based startups or major multinationals. Rather, they argue that their regions provide a good location for spinoffs, branches, or subsidiaries looking for local assets that are complementary to economic activities in Basel and Zürich. They gave examples of industrial complementarities (firms looking for areas with industrial skill pools and infrastructure) and regulatory complementarities (firms looking for European and/or Swiss footprints). They also argued that firms at certain "stages" in their life cycle would be better suited to their regions versus neighbors.

A significant amount of Aargau and Lörrach-Waldshut's positioning strategies can be interpreted as attempts to borrow size from larger and/or more dynamic neighbors. These include attempting to borrow advantages of neighboring regions' transportation infrastructure (particularly the Basel and Zürich airports as well as the Basel Rhine harbor and rail hub), research infrastructure (including ETH Zürich, the University of Basel, and Fraunhofer institutes in Freiburg im Breisgau), and access to pools of skilled labor. Cities in Lörrach in particular also emphasized their proximity to cultural amenities in Basel, both in outreach materials and in stakeholder interviews.

Most notably, these case studies demonstrate that contrasting theories of interregional economic relationships do not (necessarily) conflict with one another. Positioning approaches can reflect contrasting theories simultaneously. Aargau and Lörrach-Waldshut combine

positioning strategies that draw on both concepts of size borrowing and concepts of (avoiding) agglomeration shadow effects, and strategies that both emphasize traditional cost competition and encourage collaborative network connections.

Also important is a broader regional perspective reflected in these case actors' economic development strategy. Actors studied (through document analysis, network analysis, and interviews) represent a variety of service area and jurisdictional scales, from regional to local. Nevertheless, these actors had fairly similar conceptions of the functional regional area in which they operated. Stakeholders in both Aargau and Lörrach-Waldshut considered themselves part of a broader region which was itself competing with other large regions nationally and globally. For Aargau and its planning regions, this was more or less Northwest Switzerland, in some cases Switzerland as a whole. For actors in Lörrach-Waldshut, the greater region comprised the Dreiländereck up to Freiburg im Breisgau.

Positioning occurs primarily within these greater regions. Strategies from actors in Lörrach-Waldshut and Aargau frequently reflected attempts to distinguish themselves relative to powerful neighbors like Basel and Zürich. However, actors also described their service areas as part of greater economic regions, with whom their own fortunes were linked. While they acknowledged local competition in shopping tourism and firm relocation, and regional competition in for skilled workers and federal funding, all actors reflected an overarching concern that new firms, infrastructure or professionals be added to their regions as a whole.

How do Aargau and Lörrach-Waldshut differ in their strategies and to what might these differences be attributed? In addition to the considerable similarities in their positioning strategies, Aargau and Lörrach-Waldshut also display some differences. Some can be attributed to differences in the institutional context governing economic development in Switzerland versus Germany. Others are likely related to the physical and jurisdictional geographies of the two regions, both in isolation and relative to their neighboring metropolitan regions.

Aargau's entities emphasized tax competition and tax environments more than those in Lörrach-Waldshut. The greater focus on tax environments within economic development reflects differences in institutional contexts – Swiss cantons and municipalities having far more ability to set not only corporate income but also personal income and wealth taxes at local levels (Feld and Kirchgässner 2003; Kaufmann and Meili 2019; UCLG and OECD 2016). Lörrach-Waldshut's relative lack of emphasis on tax environments can also likely be attributed to its inability to compete with neighboring Basel on taxes, as German federal tax rates are significantly higher than Swiss ones (and public services provided are similarly different in scope) (PwC 2022). Low taxes, or lower taxes, are unlikely to distinguish Lörrach-Waldshut positively versus its immediate neighbors in Switzerland, whereas Aargau and its municipalities do have the opportunity to be lower-tax alternatives to Zürich or (in terms of personal income tax) Basel-Stadt and Basel-Land.

Possibly related to this is Aargau's greater emphasis on competition between cantons in Switzerland, and greater identification with the canton from the subregions within Aargau. While representatives at the subregional level referenced collegial and uncompetitive relationships with their neighboring regional planning associations, planning documents repeatedly referred to competition with other Swiss cantons. Collaborative objectives with neighboring cantons were mentioned in local and cantonal plans, but far less frequently.

Geographic and jurisdictional differences between Lörrach-Waldshut and Aargau also likely shape differences in their positioning strategies. Lörrach-Waldshut's population is highly clustered in the district of Lörrach and particularly in cities along the border. Multiple representatives from these cities' economic development actors described the border as a defining element for their cities' economies, influencing everything from labor and consumer markets to public finance to industrial mixes. While Lörrach-Waldshut and the municipalities in the region can (and do) also develop connections with the Freiburg region or with neighboring cities in France, at least some orientation towards Switzerland is obligatory given the significant economic effects of the border. Local governments have strong incentives to participate in cross-border governance structures and to develop strategies that take the Swiss border and the Basel area into account.

Aargau's larger scale, multiple metropolitan neighbors, and relatively greater economic power result in its less cohesive orientation. Aargau's subregions display a variety of orientations and positioning strategies. Regions close to Basel are more tightly networked with Basel institutions and their positioning strategies are reactions to Basel's strengths and weakness; regions close to Zürich display orientation and positioning to Zürich. Maintaining connections with Aargau's political and resource centers is an additional priority, with regions emphasizing connection with Aarau and Brugg (home to the cantonal capital and the FHNW respectively). Because of these multiple external and internal centers of economic influence, Aargau's economic development strategy as a whole has no single orientation toward any of its neighbors, and the canton is still discussing how to orient itself for international location promotion and export promotion efforts.

What do these case studies reveal about the concept of positioning? Although 'positioning' can overlap with concepts of economic development strategy, spatial competition, and (spatial) collaboration, it is a distinct concept. Not all economic development strategies are positioning strategies. From these case studies, an example would be Aargau's canton-wide objective to improve its strengths in knowledge-intensive services. This objective is based on Aargau's assessment of this industrial sector as one with growth potential and the canton's lack of employment in this area. Whether Basel or Zürich create any particular supply or demand for knowledge-intensive services in Aargau is not central to the choice of objective.

Another example of an economic development strategy that is not positioning is the City of Lörrach's (and Lörrach-Waldshut's) emphasis on restraint in capitalizing on border effects' benefits to retail trade and real estate. On one hand, stakeholders from local and regional entities emphasized the benefits of cross-border consumer flows to their local economies (higher tax revenues, employment, and a disproportionately strong and diverse retail and services economy for locals that increased the region's attractiveness). They also noted the benefits of cross-border commuters, earning Swiss wages and contributing more to their German city of residence's tax base. Yet both official planning documents and actors' representatives stated that they did not want their region or city to become a "bedroom community" for Basel or other regions and that retail trade brought challenges as well as disadvantages (low salaries for employees, and higher costs of consumer goods for German residents). While some elements of the City of Lörrach's strategy are designed to leverage advantages or ameliorate/avoid disadvantages from Basel's proximity, others are focused on

preserving or promoting other economic objectives like sectoral diversification – objectives that would not be likely to change based on Basel’s economy.

Some collaborative efforts are examples of regions positioning themselves vis-à-vis their neighbors. But some are not. Baden Regio’s plan to collaborate more intensely with Zürich-area economic development institutions and projects as a strategy to link itself more closely and effectively is an example of collaboration as positioning. It is an attempt to leverage effects of proximity with a geographic neighbor to generate an opportunity for economic growth.

Yet institutions can also collaborate with other geographies without specifically positioning themselves in relation. Aargau’s innovation promotion institution, Hightech Zentrum Aargau, collaborates extensively with institutions in other Swiss cantons, but these relationships are based around the topic of best practices in innovation promotion and the opportunities they present are unrelated to and largely unaffected by spatial proximity.

Likewise, some positioning strategies are competitive, but not all place competition is a positioning strategy. Tax competition in an absolute sense is not (geographic) positioning, as it does not involve strategizing relative to a geographic neighbor and the effects of that neighbor’s proximity. Aargau’s corporate tax policy, however, could be considered part of a positioning strategy. Rather than attempting to achieve the lowest possible corporate tax rates in Switzerland, the canton is aiming to establish a tax environment that ranks around the middle for Swiss cantons yet is favorable compared to its immediate neighbors. As per a representative responsible for economic development in one of Aargau’s sub-regions, the cantonal tax policy alone is unlikely to be a deciding factor for a business. Rather, it is combined with marketing of other advantages like support for innovation through Hightech Zentrum or existing industrial infrastructure (2022, interview).

What are the core elements defining *spatial* “positioning”? A positioning strategy is one in which a region (a) acts on opportunities or threats presented by a (b) geographically proximate neighbor that are (c) geographically dependent (i.e. the opportunities or threats need to be spatially mediated in some way). Positioning could consist of strategies of differentiation or attempts to capture benefits through emphasis on similarities or complementarities, or both.

Defining the term positioning involves challenges. First, while this chapter discusses and defines spatial positioning, the concept of positioning can take place in other contexts. A region can try to position itself relative to other regions in a global value chain, or in sectoral competition. These forms of positioning are not responses to the effects of neighboring economies, which distinguishes them from the way the term is used and discussed here. Yet sectoral positioning or value chain positioning would have geographic expressions and involve themes from geography; while they do not necessarily involve relationships based on proximity, they are also not aspatial.

Second, there can also easily be overlap between spatial positioning as interregional economic development strategies and other forms of positioning related to sector competition, division of labor or value chains, or other contexts. Strategies aimed at leveraging industrial complementarities between Basel and Lörrach, or Basel and Fricktal, also reflect positioning within regional value chains. Efforts to collaborate at a macroregional level for the success of the life sciences cluster in the Upper Rhine area (e.g. the cross-border BioValley network), can involve both sectoral competition with life sciences clusters in other countries and continents.

Consequently, while we can develop a precise definition for interregional economic development strategy as “spatial positioning,” said definition is not exclusive of other concepts.

Finally, the term “positioning” itself is used to mean multiple things in economic development. In the text of planning documents, outreach materials, and stakeholder interviews for the cases of Lörrach-Waldshut and Aargau, “positioning” was most commonly used to refer to spatial, or geographic, positioning as discussed in this chapter. However, it was also used at times to refer to a region’s position in rankings of regions (2022, interview), to advantages versus national and international competitors (2020, interviews), to unintentional economic orientations (2022, interview), and most distinctly, to mean a region’s capability to undertake something. Given this variety of usages, reclaiming “positioning” or even a more complex term “spatial positioning” to mean a specific economic development concept is unlikely to happen in practice.

In light of these challenges, why attempt to define and evaluate positioning? Why and how is a definition and examination of the concept relevant to theory, policy, or practice? First, giving positioning its own definition (and thus its own area of domain) is a small element in pushing regional economic theory to incorporate regional interrelationships. Academic research continues to theorize regional economic development from a primarily isolated perspective, in which a region exists within national and international contexts but the impact of other regions upon it is not a core area of focus. Even more recent work that attempts to understand the role of relationships between regions largely overlooks interregional relationships that are affected by (or determined by) proximity. Yet the research that has begun to examine these relationships finds that they do matter (Meijers and Burger 2015).

Second, policy in the past decade has increasingly asked regions to seek to differentiate themselves as a strategy for increasing their overall economic competitiveness and, at national and international levels, as a strategy to reduce the economic disparities between regions. Yet if regions are affected by their neighbors’ economies, as evidenced in the literature, identifying regional economic specializations and developing a cohesive industrial policy must take this into account. Giving “positioning” its own conceptual definition and scope could thus improve the clarity and actionability of policy directives, as well as improving the range of research, evaluation, and policy analysis undertaken to support regions in developing their strategies. Given the overall trend toward regional divergence, better understandings of interregional economic relationships and regional positioning strategies could help develop policies and practice that leverages growth in strong regions to generate growth for its neighbors. This would be especially impactful for economic relationships between relatively stronger and weaker regions.

Positioning is an increasingly relevant topic to regional studies and economic geography, as well as to economic development planning and industrial policy. Understanding the diversity of relationships that can emerge (or be developed) between two regions is key to understanding the nuances of relationships between agglomeration and growth. It is also key to developing policies that support regions in choosing positioning strategies that will result in their preferred outcomes.

## Chapter 3

### COMPETITIVENESS

#### **Regional and municipal actors' understandings of place competition and collaboration in economic development planning**

The concept of place competitiveness has been both widely debated in academic and policy literature, and widely deployed in policy and planning. The lack of consensus on its meaning and application is particularly notable because increasing the “competitiveness” of regions has been put forth by both the European Union and multiple nations as a core strategy for addressing regional economic divergence, which has been identified as a serious threat to economic and social stability (Rodríguez-Pose 2018).

Given the continued use of the term in policymaking, it is important to understand what it means to those who attempt to put it into practice. In this chapter, I use data from interviews with local and regional economic development actors within the Upper Rhine, an economically diverse macroregion, to investigate how practitioners understand and apply the notion of place competitiveness. What can be learned from the application of place competitiveness to further inform its use as a strategy to reduce interregional disparities?

Findings indicate that competitiveness is an incoherent concept for practitioners, with practitioners using a range of definitions and operationalizations, some of which were contradictory. Data revealed that while market-based logics predominated in how “competitiveness” was discussed, actual strategies cited by actors reflected both collaborative and competitive relationships between places, and ideas about how economic development could be measured were diverse. I offer a stylized multi-dimensional framework for competitive and collaborative economic development strategies, which illustrates how the two factors of scale and resource scarcity affected whether places engaged in place competition or collaboration.

These findings suggest that the concept of “competitiveness” is as problematic in practice as it is in theory and policy debate. Actors used it so diversely that its only clear use seemed to be to add rhetorical weight or validity to economic development activities. However, the proposed competition-collaboration framework also suggests that careful analysis of the drivers of competition (and collaboration) could contribute to policy development that would reduce interregional disparities at local and regional (but not international) scales. Because fundamental questions remain regarding whether “competitiveness” is inherently cumulative or zero-sum, findings do not clarify if the concept of “competitiveness” can contribute to the reduction of interregional disparities.

Research interviews were conducted with representatives of public, public-private, private and nonprofit economic development actors in the Upper Rhine megaregion. Interviewees work at a variety of scales, with the majority representing microregional and regional geographies. The Upper Rhine comprises twelve major regions and spans three international borders, including parts of northwestern Switzerland, northeastern France, and southwestern Germany (Figure 3A). As a whole, the Upper Rhine performs well on indicators of both economic strength and innovation, but the different regions within the Upper Rhine are economically diverse. In addition, the presence of three different national institutional regimes allows for comparison both within countries and also across borders. Together, these factors

make the Upper Rhine an ideal case study for examining actor perspectives on place competitiveness.

The first section of the chapter places the inquiry within the context of the existing literature and policy directives on place competitiveness and outlines the research questions in detail. The second section discusses the methodology for answering these questions, including an explanation of the Upper Rhine region as a case exemplar and an explanation of how the qualitative approach used can address the research agenda. The third section of the chapter analyzes the research findings, and the final section discusses their implications for theory and practice.

## **I. Place competitiveness in academic and policy literature**

Over the past four decades, the idea of a region being “competitive” or aspiring to “competitiveness” came into common use in both academic research and policy development, corresponding with an increased recognition of the pressures of globalization on local and regional economies (Turok 2004; Malecki 2004). Regional competitiveness is now regularly evaluated by national and international organizations (European Commission; World Economic Forum), and integrated into policy initiatives at different scales of government. The idea that a region should strive for “competitiveness” as a core objective of its economic development strategy is widespread (Martin and Sunley 2011).

Despite its ubiquity, debate continues regarding the conceptual and theoretical foundations of competitiveness as well as its operationalization and application in policy. These debates are extensive, and comprehensive reviews can be found in articles, policy reviews, special and theme issues of journals, and edited handbooks (see for example *Regional Studies* 38(9), *Urban Studies* 36(5-6), Ketels 2016, Audretsch et al. 2016, Huggins and Thompson 2017). To give context to this chapter, I briefly review some of the core debates surrounding the concept of place competitiveness and the issues in defining and operationalizing it. I then discuss the presumed link between regional “competitiveness” and the reduction of interregional disparities, and its place within broader debate about the relationship between economic growth and economic development.

### **A. From firm competitiveness to place competitiveness**

One of the earliest and best-known criticisms of the concept of place competitiveness is that it transposes a term from business economics to geography without accounting for fundamental differences between the subjects at play. In economics, competition is most widely understood as competition between firms in a market. Here, competitiveness is measured by said market, and it represents whether a firm can survive, grow, and be profitable (Turok 2004). The idea of place competition, or competition between nations or subnational regions, grew in prominence as globalization advanced (Malecki 2004; Martin and Sunley 2011). The increasing international mobility of capital, openness of national markets, and integration of financial markets mean that firms must compete in global markets. Places then compete against one another to ensure the success of their domestic firms.

Critics have argued that the concept of firm competitiveness cannot be applied to places because they do not compete in the ways that firms do. Firms that fail to compete go out of

business and exit the market, and new ones emerge to compete, but places cannot go out of business nor do new ones emerge with much frequency (Krugman 1994b).<sup>13</sup> Places also have fundamentally different characteristics from firms that affect how they would be expected to act in a purely economic model of competition. They cannot be seen as single actors with unified (or any) agency in the way that firms are (Markusen 2003). At the regional level, it is rare that a single public governance structure represents the functional urban region. The public governments of places also have public interest concerns that go beyond the firm's priority of maximizing profit or market share (Turok 2004). While places may have goals of increasing economic productivity, they also have objectives of providing public services and high standards of living (Bristow 2005).

These arguments demonstrate the inappropriateness of mapping firm competitiveness directly onto the notion of place competitiveness, but they don't invalidate the concept of place competition. While a place cannot go out of business and exit the market, a place can lose population and investment, and enter a downward spiral of decline (Camagni 2002). Places are not agents, but an evolutionary economic perspective holds that a place can be a "meaningful and relevant entity that affects the behavior and performance of local organizations" because all regions have their own economic history with the potential to affect the firms that locate there (Boschma 2004, p. 1005).

It is also becoming increasingly apparent that regions are affected differently by certain effects of globalization (Autor et al. 2016), shifts in the organization of production and labor (Massey 1979; Storper 2013), and shifts in technology and how it affects the value of knowledge and human capital (Giannone 2017). For example, Autor et al. observe that sectors particularly exposed to trade competition from China experience greater employment loss and loss of market share, and these sectors concentrate in certain regions (2016, 2021). Regions thus do compete as place units with one another, albeit not in an identical sense to firm competition.

## **B. Competitiveness and reducing disparities or divergence**

The notion that regions compete leads to a key topic for this chapter: that of increasing economic disparities between regions. Gaps in economic productivity, income, employment, immigration, and labor force participation have been widening between sub-national regions in North America since roughly 1980 and in Europe since at least 2008 (Ganong and Shoag 2015; Dijkstra et al. 2015). This regional economic divergence threatens to undermine growth, the economic health of "lagging" regions, and political and social cohesion (Rodríguez-Pose 2018).

Both the need to reduce these interregional disparities and the pressure for regions to compete in global markets are considered significant priorities for national governments and for the European Union. They have been tacitly and explicitly linked in policy statements, with the increase of competitiveness described as a tool for reducing interregional disparities. For example, the European Commission has long identified "improvement of competitiveness" in economically weaker regions as "vital to social cohesion" (European Commission 2004). The 2021-27 European cohesion policy states that a "more competitive" Europe is a priority of the

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<sup>13</sup> In a critique of Krugman's attempts to incorporate geography into economic models, Boddy (1999) notes that Krugman has "a particular disciplinary commitment to formal economic models."



European Regional Development Fund, whose own objective is to correct “imbalances among European regions” (European Union 2021). At the national level, the Swiss New Regional Policy promotes economic structural change in order to strengthen the “competitiveness” of certain regions and thereby reduce regional disparities (Swiss Confederation 2017).

However, whether increasing competitiveness and reducing interregional disparities have a positive relationship, or whether the former has the ability to cause the latter, is unconfirmed. Several theoretical issues with the concept of “competitiveness” call this link into question. First, one interpretation of the growth in global competition between regions holds that globalization marked a shift from comparative advantage, in which trade can be a positive-sum game if places specialize, to competitive advantage, in which places compete directly with each other to attract firms and workers and to capture market share (Kitson et al. 2004; Scott 1998). If so, then there is likely some element of zero-sum competition for the attraction of firms, workers, and high-quality jobs. Keating, responding to Michael Porter’s (2001) suggestion that regions all become more competitive, terms this a “logical impossibility.” (Keating 2017).

New insights into industrial policy and regional policy from the 2000s and 2010s have suggested that regions and nations should be able to find a niche in which to specialize which matches their existing potential and allows them to compete successfully in a global market (Rodrik 2004; Foray et al. 2011). But even these perspectives tend to view regions as occupying different structural positions on a “ladder of roles and functions,” implying a hierarchical, and zero-sum distribution of economic success (Iammarino et al. 2019, p.275). While removing all inequality is no one’s objective, the ladder concept undermines suggestions that increasing regions’ ability to compete will also stimulate interregional economic convergence. If a region ascends a rung on the ladder of roles and functions, one region needs to descend to take its place.

Second, several elements considered decisive to regional (and firm) economic success in the current economic paradigm promote interregional divergence (Feldman et al. 2021; Petrakos et al. 2005). Returns to scale, external economies, and first-mover advantage all support cumulative and circular effects and drive interregional disparity rather than reducing it (Pike et al. 2016). In direct criticism of what they interpreted as a “highly neoliberal” policy, Choriantopoulos and Iosifides argued that European urban policy’s emphasis on competitiveness undermined cohesion with its emphasis on competitiveness because it asked lagging regions to become competitive without addressing their relative disadvantage to others (2006).

Porter (1990) and Krugman (1990) define competitiveness as essentially (and thus tautologically) productivity, which would make it logically possible for every region to increase competitiveness (Martin and Sunley 2003). But productivity does not fully account for the effects of services and government sectors on regional economies, even though these sectors can play a considerable role in providing employment, tax revenues, and endogenous growth, all elements likely to have an indirect effect on a region’s ability to compete nationally or globally (Bristow 2005; Markusen and Schrock 2009). In addition, reducing employment can often result in increased productivity in the short term, but employment losses seem a counterintuitive indicator of a region’s competitiveness (Kitson et al. 2004).

Most academic and policy attempts at defining “place competitiveness” therefore include elements in addition to productivity – drivers of growth associated with the knowledge economy (innovation) and/or indicators of wellbeing (Birnie et al. 2019). Kitson et al. argue for

the inclusion of human capital, social and institutional capital (including networks), knowledge and creative capital, and public infrastructure (Kitson et al. 2004). Writing for an international development audience, Stiglitz et al. (2009) argue that competitiveness must include measures of well-being, and writing for a regional policy audience; Ketels (2016) concurs. Turok offers a definition of regional competitiveness consisting of three components: trade (the ability of a region's firms to succeed in external markets), productivity, and the employment rate (Turok 2004). Martin and Simmie (2008) define urban competitiveness as "the ability of cities to continually upgrade their business environment, skill base, and physical, social and cultural infrastructures, so as to attract and retain high-growth, innovative and profitable firms, and an educated, creative and entrepreneurial workforce, to thereby enable it [to] achieve a high rate of productivity, high employment rate, high wages, high GDP per capita, and low levels of income inequality and social exclusion" (4).

Yet the combination of these indicators under an umbrella term of "competitiveness" does not address potential relationships between them. A key example is the existence of evidence that increased productivity in certain industry sectors, particularly those associated with knowledge-intensive services, is correlated with increases in income inequality, rather than the assumed inverse relationship (Breau et al. 2014; Lee and Rodríguez-Pose 2013, Lee and Sissons 2016). Many indicators like employment rates or labor force participation are determined by economic, social, cultural, and political contexts that vary by nation (and sometimes region) and are not always themselves directly related to firm competitiveness (Bristow 2005). The relative importance of different drivers, and whether they serve as inputs, reflect outcomes, or both, is also difficult to untangle and justify theoretically or empirically (Kitson et al. 2004).

### **C. Competitiveness and benchmarking**

Several composite indices of competitiveness attempt to combine different drivers and indicators of competitiveness into a single value and then rank places based on this value. Most indices attempt to incorporate indicators representing positive-sum strategies and outcomes that incorporate measures of wellbeing (UKCI 2021; European Commission 2019). There are practical uses for rankings, such as prioritizing regions for public funding or identifying overlooked regions that need assistance. However, in addition to the previously mentioned difficulties in choosing and weighting indicators and making cross-regional and cross-national comparisons, these indices are inherently zero-sum – for a region to improve its competitiveness ranking, another region must drop in rank.

Closely related to the creation of indices of competitiveness is the professional practice of benchmarking, in which comparison is used as a tool for learning lessons and thus making improvements. Benchmarking in regional economic development planning and policy, and particularly competitiveness benchmarking, has been both criticized and defended in academia, and continues to be used in practice (Huggins 2007). Critics hold that benchmarking studies and indices establish correlations between elements of competitiveness, but not causality (Greene et al. 2007). They also argue that benchmarking promotes identification and imitation of "best practices," but this is unlikely to improve competitiveness because there is no single optimal development model for all cities or regions (Boschma 2004). Some critics also argue that the endogenous factors which are held to support competitiveness and innovation (e.g. unique infrastructural assets, institutional arrays, regional innovation systems, etc.) have different

levels of influence on a region's economic outcomes based on other exogenous factors, and that all of these elements might be largely outside the influence of local policymakers (Bristow 2005, Greene et al. 2007).

Some defenders of benchmarking argue that systems for regional benchmarking are varied and complex, and that the intent isn't to search for and replicate "best" practices, but to contemplate other systems' features and engage in policy learning (Huggins 2007). It has also been observed that benchmarking could take either a zero-sum approach to competitiveness by ranking places in a number order, or it could encourage places to view themselves as sharing a space with others from whom lessons can be drawn (Cox et al. 1997).

#### **D. Place competition, place collaboration, and scale**

Competitiveness is also used indiscriminately of scale – while many definitions or policy descriptions suggest that regions must be able to compete in a global market, distinctions are generally not made between global, international, national, or local competition. Yet place *competition*, and its counterpart of place collaboration, are often studied in terms of how localities and regions interact in pursuit of scarce resources that are bounded by smaller geographies. Location competition, in which places offer subsidies or other incentives to attract firms away from their current locations, tends to be nationally (and sometimes regionally) bounded (Atkinson 2015; Basolo 2003; Dawkins 2003). The setting of tax regimes, labor and land use policy, and other legislation can also vary sub-nationally and reflect competition between cities or regions to attract firms or workers. Place competition has been criticized for being inefficient, inequitable, and/or zero- or negative-sum in practice (Bartik 1991). Whether regions engaged in, or winning, these subnational competitions are considered *competitive* under various policy definitions is inconsistent.

In addition to engaging in competition with one another, places also engage in collaborative economic development strategy. In a 2003 comparison of collaboration studies and policies in the US and Europe, McCarthy notes five main categories of collaboration, including direct and indirect incentives, encouraging scientific collaboration, lobbying higher levels of government, and policy learning (McCarthy 2003). One observation is that place competition between and collaboration among local and regional public agencies are not mutually exclusive. However, places often appear to collaborate as a strategy to improve their ability to compete at a higher scale (Leitner and Sheppard 1999). Consequently, collaboration might also not promote economic convergence, but rather shift the arena of competition to a higher scale of government.

In sum, debate over "competitiveness" finds the concept uncertain and difficult to define. It may have limited theoretical basis, and no existing attempts to define or operationalize it have met with any consensus of success. Despite this, "competitiveness" is regularly used for a myriad of purposes; notable among them is the idea that increasing competitiveness might be a tool for reducing the presence of economic disparities between regions. Whether it can do so would be difficult to test, given that no widely acceptable measure of "competitiveness" exists. It is, however, theoretically questionable given that some aspects of "competitiveness" and many of "place competition" appear to be zero-sum situations, in which no region's competitiveness can increase without another region's decreasing.

## II. Research questions and methodology

The chapter adds an additional perspective to the academic and policy debates: that of active economic development practitioners who engage with the concept of competitiveness in their work at the local and regional level. Among those concerned with place competitiveness and interregional disparities, economic development actors are the public representatives who stand closest to the implementation of strategies and their outcomes. Their perspectives can highlight how academic and policy terminology is interpreted “on the ground.”

This chapter is guided by the following research questions:

- How do economic development actors conceptualize and operationalize (place) competition? What is the scale and scope of competitiveness (with whom do they compete, for what, and why)? How do their perceptions vary based on the type of actor they represent?
- How do their perceptions of place competition reflect or contrast with how they see place-based collaboration?
- How do economic development actors’ stated perceptions of competitiveness and their strategic behaviors reflect or contrast with theoretical ideas?
- What do economic development actors’ perspectives tell us about the proposed link between the idea of “improving competitiveness” and reducing interregional disparities?

To answer these questions, I use data from 27 interviews with representatives of local, microregional, regional, macroregional, and national economic development actors serving areas in the Upper Rhine region. Actors interviewed include public economic development offices at the local and regional level, public and public-private economic development agencies, chambers of commerce, national, regional, and university-affiliated innovation promotion programs, and startup support and entrepreneurship programs. Because the Upper Rhine region spans international borders between three countries, actors engaged in promoting cross-border economic development are also interviewed.

Interviews lasted between 30 and 90 minutes in duration, took place in German or English, and were conducted in person, over the telephone, or using videoconferencing software (Zoom and Microsoft Teams). The interviews were semi-structured, using a standard set of questions and additional questions tailored to each actor based on pre-interview research. The standard questionnaire’s 15 question began without mention of the term “competition” and concluded with specific questions about competitiveness.

To analyze the interview data, interviews were recording and responses transcribed. For four interviews, recording was not an option; data used consisted of notes taken simultaneously during the interview. The interview responses were first coded to identify (a) themes expected based on the literature (b) potential recurring themes and (c) unexpected themes or responses (Ryan and Bernard 2003). A second coding quantified recurring themes. The below findings reflect themes repeated with frequency (either within interviews, across interviews, or across diverse actors), intensity (level of elaboration or repetition), and those that connected with existing theoretical or empirical research (either in contradiction or support).

Three countries and approximately twelve distinct regions comprise the Upper Rhine megaregion (Figure 3A). As a whole, the Upper Rhine could be described as competitive. Most of its regions are relatively economically strong compared to their countries' average, and several rank highly on indices of innovation, competitiveness, and location quality. Among these regions, however, some are more rural, some are former industrial strongholds, and others are high-growth, dynamic agglomerations. Consequently, some of the Upper Rhine's regions are striving to maintain competitiveness, while others strive to improve it. The presence of international borders also exacerbates some forms of competition, particularly interregional competition between cross-border neighbors. While the Upper Rhine is considered an example of a cohesive and cooperative border region, significant cross-border differentials in factor costs and regulatory structures change the potential for interregional economic relationships based on both competitive advantage and comparative advantage. Finally, the presence of three different national institutional regimes allows for comparison both within countries and also across borders. Together, these factors make the Upper Rhine an ideal case study for examining and comparing actor perspectives on competitiveness.

**Figure 3A: The Upper Rhine megaregion**



### III. Findings

#### A. Identifying competitors

Although places are not actors themselves, practitioners referred to their competitors as places, rather than the actors representing these places. The only exceptions came within the context of discussing collaboration, in which some representatives emphasized that while they did compete in some areas, they maintained positive and collegial relationships with their counterparts in neighboring cities and regions. Most actors interviewed had two clear conceptions of the territory that they represented in place competition: their service area or jurisdiction, and the functional economic space that included their service area. Functional spaces identified were of similar size regardless of the organization's service area, and they primarily reflected labor market areas.

Actors representing all sizes of jurisdictions (municipal, microregional, regional, and macroregional) considered themselves to be in competition with geographies outside of their domestic boundaries and outside of their functional space. Many mentioned "Europe" (meaning portions of the continent outside of their home country); some also mentioned North America and Asia. Some specific regions were mentioned in the context of sectoral competition. For example, representatives for Basel's public economic development agency and an innovation promotion network in the Karlsruhe region both noted competition with specific cities in North America and/or China for life sciences research and firm activity.

Most actors also mentioned domestic regions and immediate neighboring places as competitors, but these responses reflected a rough hierarchy of economic strength. Actors from Basel and Karlsruhe, two regions in the Upper Rhine with high employment in knowledge-intensive sectors and the highest GDP per capita, did not mention their immediate neighbors as competitors; they focused on international places. Actors representing other regions in the Upper Rhine mentioned their neighbors and other domestic regions as well as international places as competitors.

#### B. Identifying the objectives: What do economic development actors compete for?

Competition for skilled workers was mentioned most frequently and by the widest variety of economic development actors. It was a theme among actors representing former industrial areas, actors representing more rural regions, and actors representing large and dynamic metropolitan economies. Skilled labor was of concern to public economic development departments, chambers of commerce, innovation promotion firms, and public-private agencies. According to these actors, it was also a key concern for firms in their regions and influenced firms' location decisions. For more rural, industrial, and post-industrial regions, actors expressed concern that metropolitan areas acted as "magnets" for skilled workers, causing brain drain. In metropolitan regions, actors stated that talent was one of the key elements in their success and they needed to continue maintaining access to skilled workers for their firms.

Actors also described competition for new firms, particularly those in targeted and/or high value-added industry branches like life sciences and high technology. In addition to new firms, actors reported competing for entrepreneurs or startups. German municipalities and microregions on the border with Switzerland mentioned competing with their neighbors for shopping tourism (a geographically-constrained market share), driven by significant consumer price differentials between Germany and Switzerland.

Several actors stated that they competed for “visibility” among places, both geographic neighbors and similar regions worldwide. The implied audience here for “visibility” included firms, investors, new residents (particularly skilled workers), and collaborators or funders of research. As an example, a representative of a sub-region in Canton Aargau stated that regional quality (which she described as including a high standard of living quality, a diversity of agglomeration and ‘small spaces,’ and local amenities) was an important element in competition with other regions. She emphasized that not only was maintaining or improving regional quality important, but that economic development planners and regional leaders had to “make it visible.” For a local representative of the applied sciences university in Lörrach, the region faced the challenge of being overlooked or unknown among the general population nationally. A representative at the cantonal level in Basel-Stadt stated that a significant objective for economic development in the canton was being “known worldwide” as a digital life sciences region. A representative of an innovation network serving the Karlsruhe region noted that a local startup support program was collaborating with neighboring clusters in order to become “more visible” internationally. And representatives of a cross-border institution stated that increasing visibility of the Upper Rhine region among European regions (“at the EU level”) was a priority.

Actors at all scales of governance also mentioned that they competed for visibility in the sense of political influence in their national or European Union governance structures. A municipal representative in Lörrach stated that their regional economic development agency helped them bring projects “to Stuttgart and Berlin” (representing the state government of Baden-Württemberg and the national government of Germany respectively) (2020, interview). A representative of a cross-border institution stated that having coordinated lobbying for the Upper Rhine in “Paris, Berlin, Bern, Brussels” was important (representing national governments of France, Germany, and Switzerland, and the European Union government) (2020, interview). All five cross-border institutions interviewed mentioned the importance of effectively bringing regional issues to the attention of national governments (2020, 2022, interviews). Cantonal and regional representatives in Switzerland and Germany mentioned both collaborating and competing with neighbors to raise their region’s profile in the eyes of their national governments (2020, 2022, interviews). Commanding greater political visibility (and thereby influence) was a priority because it allowed economic development actors to advocate for policies important to their regions and or receive public funding for economic development projects, public research investments, and infrastructure.

### **C. Collaboration: When do economic development actors collaborate, and why?**

Local, subregional, and regional actors described extensive collaboration with neighbors, both formal and informal, and ranging from intense to casual. The majority of collaborations represented places sharing or pooling resources or authority in order to achieve some form of scale.

Municipalities and regions pooled tangible and intangible resources like funding, staff expertise, and political clout to enable large projects that would be difficult or infeasible independently. Cities in the Lörrach and Waldshut regions of southwestern Baden-Württemberg (Germany) collaborate with their regional chamber of commerce on location promotion for the region. Regions also collaborated to transcend jurisdictional boundaries that would undermine independent work, allowing them to undertake projects at scales appropriate to the topic. For example, multiple municipalities and regions

collaborate on INTERREG-funded projects in the border region that permit the construction of cross-border transportation infrastructure, address environmental issues in shared watersheds, or coordinate vocational training and recognition of professional certifications across borders (2020, interviews).

Collaborations often represented both pooling of resources and pooling of administrative geographies – a significant amount of those mentioned involved shared infrastructural or physical planning needs. For example, the Baden region of canton Aargau collaborates closely with districts in canton Zürich on transportation infrastructure in the Limmattal, a river valley that links the city of Zürich and the city of Baden. The Fricktal region in Aargau collaborates with regional, local, and cross-border institutions in the Rheinfelden border area on a large industrial development project (Sisslerfeld); while the project will be developed entirely on Swiss land, impacts on employment, housing, and infrastructure require joint planning responses with neighboring municipalities and regions across the border in Germany (2022, interview).<sup>14</sup>

Regions also leveraged economic complementarities through collaboration, enabling them to use a more diverse set of resources. The cantons of Basel-Land and Basel-Stadt collaborate with Canton Jura on the development of a joint medium-term economic development strategy and participate jointly in an inter-cantonal “Regional Innovation System” funded by the Swiss Regional Policy (NRP) (RIS Basel-Stadt, Basel-Landschaft, Jura 2020; Kanton Basel-Stadt, Kanton Basel-Landschaft, République et Canton du Jura 2020). Per a representative from Basel-Stadt’s economic development department, the canton of Jura is “very much a complementary region” to the two Basel cantons (2020, interview). From the Basel perspective, Jura, which is less populated and less developed than the two Basel cantons, offers opportunity for large production or construction sites, while the Basel cantons offer “more of a central function” with infrastructure associated with larger agglomerations like an international airport and cultural amenities. A representative from a public-private economic development agency for the Basel cantons, which undertakes location promotion and business attraction activities, also mentioned that Jura can be marketed successfully abroad as a French-speaking location for multinationals interested in having a base in a Francophone region (2020, interview).

Finally, actors reported policy learning activities and exchange of knowledge through informal exchange. Economic development professionals at the regional and municipal level from Alsace (France), southwestern Germany, and northwestern Switzerland also reported regular meetings or communication with one another to discuss projects, future plans, and build contacts (2020, interviews).

#### **D. Simultaneous collaboration and competition**

Competitive and collaborative relationships between local and regional actors were not mutually exclusive. The concept of “the region” (meaning the functional economic space) as an economic ecosystem whose overall success would benefit everyone was mentioned repeatedly. Local actors referred to competition with neighboring jurisdictions over firm relocations or startups, but added that the most important thing was that a firm find the right location fit within their greater region (2020, 2022, interviews). In the perspective of a German municipal

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<sup>14</sup> Kanton Aargau, FricktalRegio. (2022). Perspective Sisslerfeld III / Gebietsentwicklung ESP Sisslerfeld. June 2022.

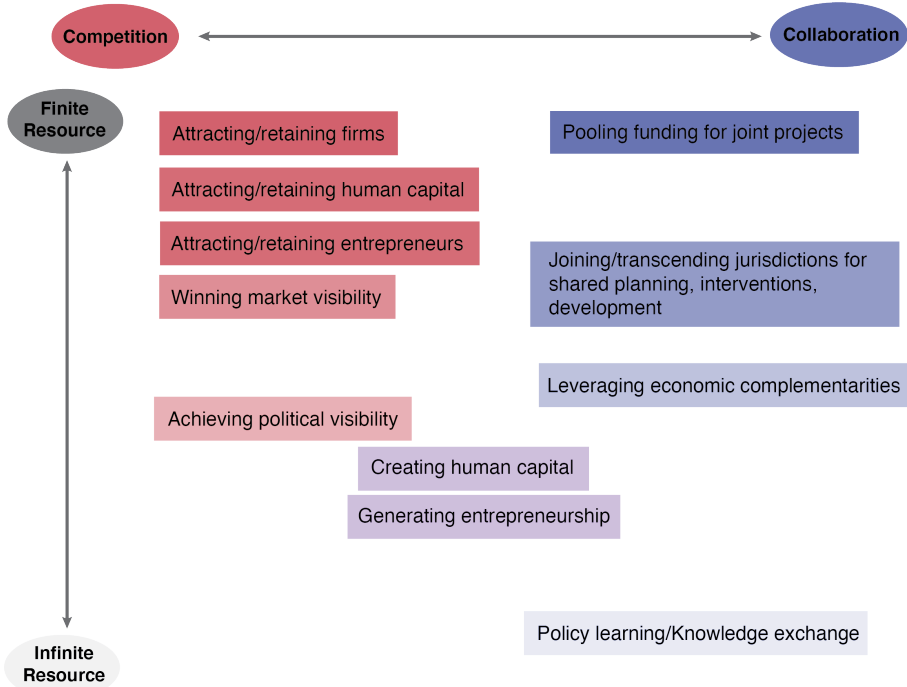


economic development professional, even if a firm located in a neighboring community, jobs would still be created that local residents could take (2020, interview). A Swiss economic development professional said that if he could help bring a new firm to his canton, it would be “a win” even if it did not locate in his jurisdiction, because the firm would create more tax revenues that the entire canton would share (2022, interview). A representative of the regional chamber of commerce in southwest Germany stated “At the end of the day, it’s not that bad – whether a firm moves to Basel or to us or to Alsace, they still need suppliers, skilled workers, so we have to work as a whole region. We’re three countries but we need to be attractive as a region globally” (2020, interview).

Two factors mediated whether a specific relationship, or a specific strategy, was competitive or collaborative. First, competitive or collaborative approaches depended on whether the objective concerned a relatively finite or relatively infinite resource (Figure 3B). Strategies for capturing market share and attracting firms, workers, or residents tended to involve competition, insofar as actors reported explicitly or tacitly comparing their situation to those of other places and devising strategies to distinguish themselves favorably. Economic development actors “hunted” for these finite resources and attempted to win them away from others. The time frame for implementation and expected results also tended to be shorter for these approaches.

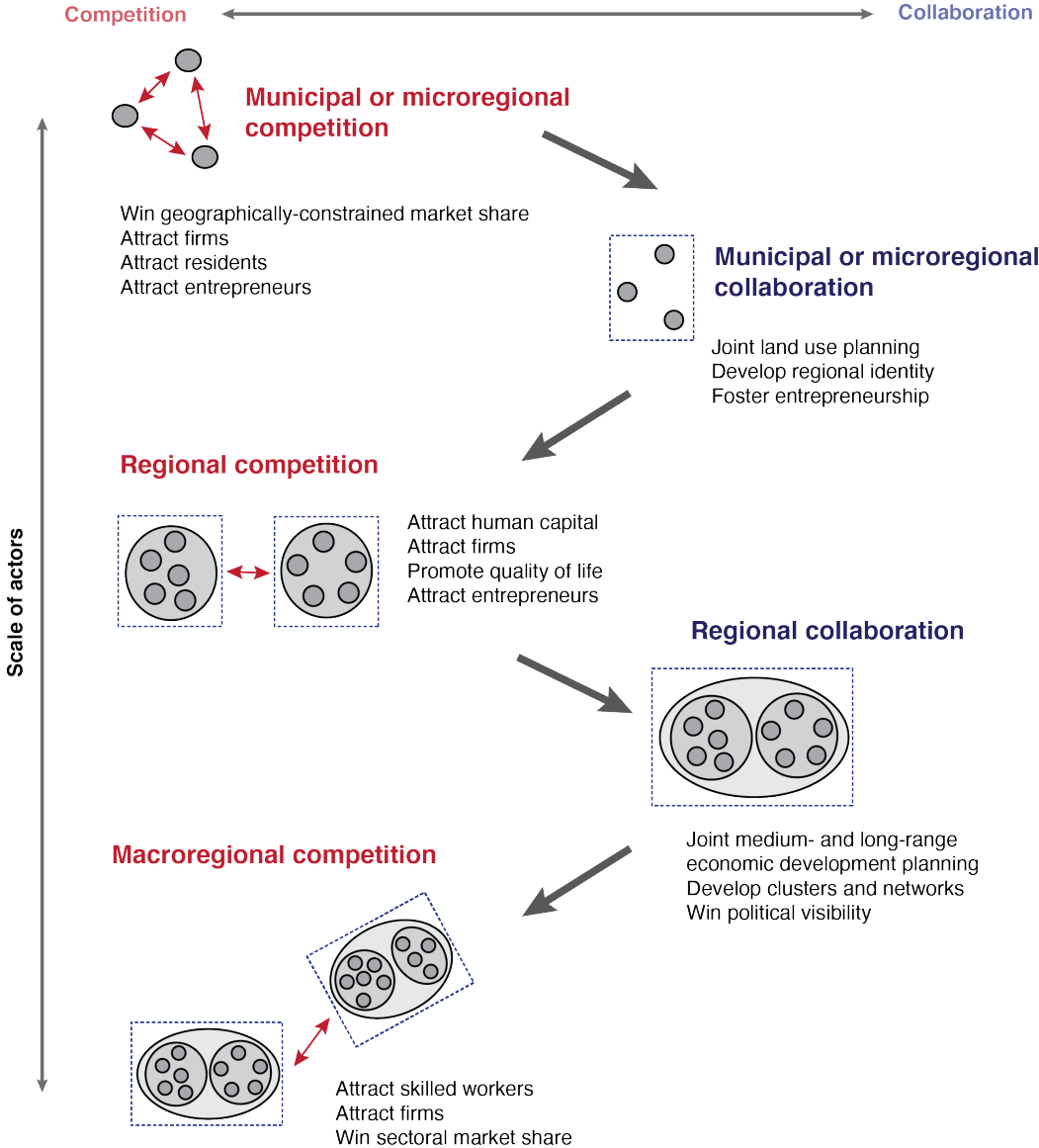
Approaches focused on internal investment, like continued education or upskilling and targeted education programs, entrepreneurship support, network building, and infrastructure projects were undertaken as collaborative affairs between places. These strategies interpreted economic development as a longer-term undertaking not defined by scarcity, and reflected a “cultivation” approach in as opposed to “hunting” for finite resources.

**Figure 3B: Effect of resource scarcity on competitive-collaborative relationships**



The second factor determining whether a relationship was competitive or collaborative was the scale at which it occurred. Whether an activity was competitive or collaborative was relatively dichotomous insofar as no actor gave an example of simultaneously collaborating and competing with the same actors for the same objectives. However, activities that were competitive at one scale could become collaborative at a larger scale, a finding that corroborates earlier research (Leitner and Sheppard 1999). Figure 3C presents a stylized depiction of this relationship between competition and scale, using example activities from the interview data.

**Figure 3C: Effect of scale on competitive-collaborative relationships**



For example, stakeholders from German border cities mentioned competing with their neighboring municipalities for cross-border retail market share (2020, interviews). In Switzerland, where municipalities generally have the authority to set income tax levels, they also competed for (wealthy) residents (Feld and Kirchgässner 2001). These same actors (and their counterparts at the regional level) collaborated to attract skilled workers from neighboring regions. For example, the regional economic development agency for the districts of Lörrach and Waldshut in southwest Germany collaborates with local private employers and municipalities on a project to attract skilled workers, including producing outreach materials and a website. They provide job listings, promotional material about the region's natural and cultural attractions, and information about family and social resources like schools and childcare (WSW, n.d.). Similar projects in Swiss cantons were also organized and sponsored at the regional level (Verein Work Life Aargau, n.d.).

Regions also formed collaborations with neighboring regions to promote themselves nationally and internationally. Switzerland's "metropolitan regions" represent groups of cantons in international location promotion; membership is voluntary but nearly all cantons belong to one.<sup>15</sup> Regions also collaborated with neighbors on medium- and long-range economic development and land use planning with the goal of distinguishing themselves versus other macroregions in competition for international firms, market share in specific sectors, cluster development, or political visibility. In addition to the strategic planning collaboration between the Basel cantons and the canton of Jura, the Lörrach and Waldshut districts partnered with the Südlicher Oberrhein region (encompassing Freiburg city and its three surrounding districts) on a regional strategy concept for a Baden-Württemberg/ERDF funding competition entitled RegioWIN 2030 ("Regional Competitiveness Through Innovation and Sustainability") (KlimaPartner Oberrhein 2020). Public-private entities with a sectoral focus also operated and built networks representing collaboration at the regional and macroregional level in order to compete with other macroregions globally. The BioValley organization promotes the life sciences industry and builds networks between firms, universities, and public economic developers. There are three BioValley clusters in Freiburg im Breisgau, Alsace, and Basel, as well as an umbrella organization linking the networks to promote objectives in the Upper Rhine. DIGIHUB Südbaden, a publicly-funded initiative to support firms with digitalization, is a collaboration between the regions of Südlicher Oberrhein and Hochrhein (including Lörrach-Waldshut) in Baden-Württemberg. University networks also spanned the Upper Rhine in life sciences, high tech, and sustainability technology.

This relationship between scale and competition/collaboration was explicitly recognized. A representative from the public-private economic development agency representing the Basel cantons and Jura described a portion of his organization's work as "precompetitive," encompassing topics like economic ecosystems, network development, and labor market activities. For this "precompetitive" work, the organization considered its functional area, including much of the Upper Rhine, Zürich and Aargau, rather than prioritizing solely its service area (2020, interview).

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<sup>15</sup> Canton Aargau is one of the only Swiss cantons that does not currently participate in a 'metropolitan region' multi-cantonal economic development project; a representative from their economic development agency says they are considering the best strategic approach as they fall geographically between the Zürich and Basel regions.

### **E. Defining and operationalizing “competitiveness.”**

Metrics for success that were frequently mentioned by economic development actors included human capital, the tax base and tax policy in comparison to similar places, sectoral/industrial diversity, and the value-added and salary levels of new and existing jobs. Not all of these indicators were mentioned explicitly as demonstrating “competitiveness,” but there was a general consensus that they were essential elements in economic development. Actors tended to cite metrics or use operationalizations in which they excelled, and discount ones that did not favor their region or municipality. For example, all representatives that mentioned indicators of innovation argued that these indicators were not representative of the true level of innovation from their geographies. A representative of southwest Germany stated that their low patent levels and low levels of employment in research and development occupations did not accurately capture Lörrach or Waldshut’s innovative activity, arguing that innovative activity was taking place in small firms and through research partnerships with other regions. A representative from the Basel region argued that their low numbers of startups and university enrollment (compared to regions like Lausanne and Zürich, which host Switzerland’s top two universities) obscured their high patent numbers and innovative performance. Representatives in Aargau and Solothurn also argued that their lower numbers of startups did not capture innovative activity occurring in smaller, more traditional firms (2020, 2022, interviews).

Actors had disparate reactions to benchmarking studies. Several Swiss local actors mentioned their favorable positions in third-party “rankings,” such as UBS’s “Cantonal Competitiveness Indicator” or Credit Suisse’s “Locational quality” rankings (UBS 2021; Credit Suisse 2021). There was no consensus about what these rankings meant in practice, however. Two local representatives suggested that firms took them into account when making location decisions and another local representative stated that they would “improve your region’s profile externally” (2021, 2022, interviews). A cantonal representative did not believe that firms were aware of or interested in the rankings, saying “it’s just information for the authorities” (2022, interviews).

Success relative to neighboring regions was mentioned by several actors, but not solely by the most successful. Some of the more economically dynamic small regions mentioned that they were “winning” or particularly successful in inter-regional competition (2022, interviews). But regions and municipalities with more moderate economic growth also discussed their successes and described their proximity to dynamic regions as an advantage for them.

Finally, two regional public actors mentioned the reduction of disparities between regions or subregions as a metric for the success of economic development planning and, in one case, as a metric for competitiveness (2022, interviews). A Swiss cantonal representative specifically mentioned financial equalization payments, in which public funds are transferred from wealthier regions to poorer regions, as an indicator.<sup>16</sup> Notably, they did not name interregional or intraregional inequality as a challenge for their region. One representative added that a challenge faced by her region was the lack of federal funding streams to invest in stronger

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<sup>16</sup> The Swiss federation provides for federal equalization payments between wealthier cantons and poorer cantons, and within cantons, most provide for equalization transfers between wealthier and poorer municipalities. (Swiss Confederation 2022)

municipalities and subregions, as the existing programs focused on supporting peripheral or underperforming areas.

#### **F. Competitiveness and market analogies**

At the conclusion of the interviews, actors were asked directly whether they believed that all regions could simultaneously become more competitive. Some actors responded by asking for a definition of competitiveness (none was provided) or by defining it themselves. The majority of actors, however, answered directly in the negative or expressed skepticism. Several referred to the idea of a static “pie” of economic growth being divided, and that having a larger piece meant that others would necessarily have a smaller piece. A representative from a microregional agency stated “I would think that there would have to be both winners and losers. If I’m more competitive and innovative, then I get a larger piece of the cake. The cake is not growing. My philosophy would be – seize opportunities, because if you don’t, someone else will.” Some referred to the “growth imperative,” stating that a region’s economy must either grow continuously or face decline and loss (2021, 2022, interviews).

These perspectives reflected a dominant theme of commanding market share, competing for scarce resources, and either growing or going out of business. They reflected a tendency to layer analogies of firm competitiveness onto place competitiveness, and a general embedding of market principles in governance strategy. Only one actor explicitly stated that they believed competitiveness could increase across all regions simultaneously, and added that they did not believe that everyone could increase competitiveness “at the same rate with the same tools” (2022, interview).

Yet at the same time, these actors’ descriptions of competition and collaboration did not reflect a zero-sum perspective. There was considerably greater emphasis on the benefits that their neighbors’ success would bring to their region, rather than the threats that their neighbors’ economies posed to them. Multiple actors stated clearly that they considered competitive economic development activities, such as attracting new firms, to be of secondary importance to objectives like growing existing firms, encouraging entrepreneurship, and improving infrastructure. The actors who most emphasized resource scarcity as a governing principle of place competition were equally (or more) enthusiastic about collaborative strategies compared with their peers. All interviewees stated that regional success would benefit them as a whole and in the long term, even in the context of discussing competition with neighbors for human capital or investment.

#### **IV. Discussion**

This chapter is framed by the debate about how “place competitiveness” can and should be defined, and whether pursuing “competitiveness” can be a strategy for addressing interregional disparities. I examine how the economic development actors expected to produce or foster place competitiveness understand the concept.

The range and inconsistency of actors’ conceptions of competitiveness underscores the difficulty of defining the term in a way that is meaningful either theoretically or to policymaking and practice. Not only did interview data reveal a diversity of definitions, operationalizations, and indicators, but even individual actors stated or implied different – sometimes contradictory

– definitions within a single interview. Market-based logic predominated in how competitiveness was discussed, with actors referring to scarcity of resources and zero-sum games, particularly when directly asked to consider the term. Yet their descriptions of strategy and practices broadly deemphasized interregional or inter-local competition for relocating firms and skilled workers, and emphasized strategies to cultivate local and relatively non-rival assets and collaborative work.

Some of this confusion and contraction could be attributed to actors viewing competition as occurring at different scales, as evidenced in the findings. For example, perhaps in practice, they experienced both competitive and collaborative relationships with their immediate neighbors, but perceived the “zero-sum” concept of competition as applying to their greater region in an international context. This would corroborate some local actors’ perceptions that even ‘losing’ a firm to a neighbor or another region in their country is a victory.

Particular conceptual blurriness seemed to exist between the action of *competing*, the presence of *competition*, and the idea of *competitiveness*. Local actors clearly and consistently identified *competing* and *competition* as engaging in competition for resources with their neighbors and with other geographies, while *competitiveness* encompassed nearly all strategies for economic development and its operationalizations included a wide variety of indicators. The vague, contradictory, and/or indiscriminate use of the term competitiveness could reflect the observation that “regional competitiveness” as a rhetoric can help justify policy initiatives and build broad support for them by referencing an external threat (competition) (Bristow 2005). Regardless of whether economic development strategies are in fact competing for scarce resources or for visibility, collaborating to pool resources or develop endogenous assets, or any other competitive or collaborative approach, adhering to a general ‘stance’ in which regional competitiveness has winners and losers might help economic development actors gain traction for their work among broad audiences. Given the value ascribed to the notion of “competitiveness” in policy directives and benchmarking and indices, economic development actors would benefit from defining it in whatever way highlights their region’s strengths.

While findings underscored the conceptual fuzziness of place competitiveness, they also helped disentangle nuances in the implementation of collaborative and competitive strategies. Actors’ responses revealed that the scales of actors involved, the types of economic development activities or strategies, and the time frames for implementation all affected whether an economic relationship was competitive or collaborative. These nuances should be considered in policy, particularly in national or international policies intended to apply to a diverse group of places. Since a single consensus definition of competitiveness is unlikely to emerge, it must be redefined for each policy approach and each geography. In any single strategy, with whom is a region competing and/or collaborating? Is the objective something finite (e.g. existing firms), something expandable (e.g. education levels of the population), or is this difficult to determine (e.g. visibility)? What is the time frame for implementing the strategy and expecting results?

Although economic indicators vary among the Upper Rhine’s regions, subregions, and municipalities, it is notable that there is relatively low inter- and intraregional inequality compared to other macroregions. A representative for a cross-border coordination entity noted that interregional inequality was not a particular concern for their cross-border work and that the Upper Rhine had low levels of inequality compared to other European border regions

(2020, interview). While Switzerland, Germany and France all have interregional disparities in employment, incomes, and other indicators, these disparities are lower than in many developed nations (OECD 2020). Even municipal representatives referring to competition for shopping tourism market share stated that they didn't feel like they were "fighting over resources" with their neighbors. Consequently, the idea of simultaneous collaboration and competition may be easier to maintain for the actors interviewed in this case study. It may also be easier to gain political support for "cultivating" strategies, collaboration and networks for actors in the Upper Rhine than for those in countries with greater interregional inequality, slower economic growth, or long histories of zero-sum economic development strategies (Atkinson 2015).

Because the concept and operationalization of "competitiveness" are incoherent among practitioners, it is difficult to support a broad connection between "competitiveness" and "reducing interregional disparities." The effect of geographic scale on moderating between competitive and collaborative relationships underscores this challenge. If the objective of policies tying competitiveness and the reduction of disparities is to reduce disparities between subregions within a region, regions within a country, or regions within Europe (all goals elaborated in various policies<sup>17</sup>), development policies emphasized would themselves differ and "competitiveness" would be conceptualized differently for different geographies.

In addition, while possibilities for combining collaborative and competitive strategy did emerge from the study, these were also scale-dependent. If competitiveness strategy emphasized connecting weaker regions with stronger regions in a complementary way, this could potentially reduce regional disparities. However, such an approach does not address fundamental concerns about zero-sum competition promoting regional disparities. It simply increases the scale at which regions are competing.

Questions of whether elements comprising "competitiveness" are inherently cumulative were not answered by input from policymakers. Some actors' responses alluded to cumulative processes, referring to dynamic pressure to maintain economic growth trajectories. Yet none considered their regions to be disadvantaged relative to their neighboring regions, even when said neighbors enjoyed more of the inputs of "competitiveness" like human capital, entrepreneurial activity or investment, or indicators of innovation. This could also reflect shifting perspectives due to scale - actors might be willing to accept being the least competitive region or municipality in an overall competitive macroregion like the Upper Rhine because they consider themselves more competitive than regions elsewhere in Europe or the world. Or it could reflect the relative lack of resource scarcity for economic development actors in the Upper Rhine itself.

As the theoretical literature demonstrates, defining and operationalizing "competitiveness" is complex and even contradictory; this is likewise reflected in the perspectives of the actors tasked with acting on "competitiveness" through policy and programs. Even if academic or policy debates were to find consensus on a definition of competitiveness, it seems unlikely that it could be broadly disseminated, accepted and adhered to by all actors. It would be particularly difficult given that existing concepts of competitiveness, heavily influenced by firm

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<sup>17</sup> E.g. Aargau Services Standortförderung: Cantonal Economic Development plan. Swiss New Regional Policy. European Cohesion Policy.

competitiveness, are already pervasive. One possible takeaway is that “regional competitiveness” is indeed a term without meaning, but that its usefulness lies in its ability to justify economic development policies in general to broader audiences. Because a region’s competitiveness is based on highly specific localized factors and, as it is dynamic, is specific to a certain time frame, then having a term that must have meaning regularly reassigned to it could be an advantage. Though not academically sound, this approach could be useful in policymaking, as place competitiveness could evolve to reflect the challenges faced by a region, its endowments and tools, the global economic context, and regional priorities, all of which change over time.



## Conclusion

Findings from the three chapters of this dissertation share overarching conclusions. Economic development actors do strategize in reaction to the opportunities and risks posed by economically stronger neighboring regions. Their strategic choices are mediated by interregional economic differentials, but also by formal and informal institutional contexts. To conclude, I summarize the contributions of the dissertation. I present both some general lessons and some specific next steps for continuing this research agenda. I also discuss the broader application of research output on interregional economic relationships, particularly ones between strong regions and their neighbors.

The dissertation attempts to emphasize a planning perspective on theoretical understandings of interregional economic relationships, and center this perspective in both the research methods and the dissertation output. I combine the perspectives of representatives of economic development organizations with quantitative data, network analysis, and document analysis. Each chapter interrogates a concept that practitioners are expected to implement in their work, and each chapter offers a typology or framework that draws out underlying mechanisms shaping interregional relationships.

The first chapter finds that economic differentials drive how cross-border integration occurs, but do so differently for functional integration versus organizational integration. I discuss conceptual and methodological challenges with evaluating ‘institutional’ integration and ‘organizational’ integration. I provide a typology of potential interregional relationships based on the presence of economic differentials, and a framework for analyzing the complex feedback loops that exist between formal institutions, informal institutions, and economic context.

The second chapter observes how economic development actors attempt to capitalize on potential advantages and mitigate potential disadvantages of proximity to a stronger neighboring region. I propose and refine a definition of spatial positioning as a development strategy that merits specific analysis. To inform the identification, analysis, and creation of positioning strategies, I offer a typology of how positioning strategies reflect different mechanisms theorized to shape economic relationships between regions.

The third chapter examines actors’ understandings of the concept of place competitiveness, and presents a framework describing how competitive and collaborative relationships between places are defined both by scale and by the scarcity of resources involved. Perspectives from practitioners corroborate critiques that “competitiveness” is a fuzzy concept, but also reveal a diversity of ways in which the term is used, including ways in which the fuzziness of the concept can contribute to practitioners’ objectives.

The dissertation’s orientation towards the nexus of practice and theory underscores the non-linear path between academic research, policy development, and practical applications in economic development. Research findings emphasize how theory, policy, and practice evolve and influence one another simultaneously. In all three chapters, interview data revealed practitioners reacting to different ideas of how regions might compete, reflecting a range of economic concepts of how their neighbors could affect them, and drawing from recent and less-recent economic policy analysis. Their actions shaped interregional networks, economic planning, and policy implementation. However, in addition to informing the research in this dissertation, the outcomes from these practitioners will be studied in future academic research

and inform future policy development. Depending on research design, these feedback loops can pose an endogeneity challenge – for example, in the sense that institutions both cause and result from economic development, it is difficult to establish causal relationships between the former and the latter (Tomaney 2014). But they also present an opportunity to examine processes of knowledge exchange and policy innovation.

One question unaddressed by this dissertation is the evaluation of economic strength when evaluating “imbalanced” interregional relationships. I use economic productivity to distinguish “stronger” regions from their neighbors, as the important element is comparative rather than absolute economic performance. However, separating the effects of productivity, dynamism (growth), quality (high wage employment), and agglomeration (size) would contribute immensely to our understandings of how regions affect neighbors. Rapid growth in economic productivity and/or employment is likely to have different effects upon a neighboring region than economic size or productivity. As an example, rapid growth is more likely to cause spillover effects of demand for workers, housing, or other resources upon a neighboring region that are difficult to absorb or compensate for. Similarly, it would be both theoretically interesting and practically useful to understand how large agglomerations that are stagnant or even shrinking affect their smaller neighbors.

Another highly relevant question is how interregional economic divergence relates to intraregional economic divergence, both of which appear to be increasing. If processes of divergence are occurring between regions, what kinds of corresponding processes are occurring within them? Initial research suggests that similar mechanisms drive both processes of divergence (McCann 2019; Pike et al. 2016). Do economic development actors’ responses to interregional divergence complement or contradict responses to intraregional divergence?

Several additional methodological approaches could bring research on this topic forward. The dissertation focuses on quantitative network data reflecting economic development actors’ behavior, and on qualitative interview and document data that reveals actors’ perceptions and motivations. But do actors’ strategic choices or understandings of themes like networks, differentials, complementarities, or competitiveness correspond with quantitative indicators? Additional data reflecting economic development performance (including indicators like productivity, employment by industry, wages, and new firms) would allow for comparison.

A more dynamic perspective would also contribute new insights on the themes of interregional relationships. The dissertation provides a static snapshot of networks and relationships, but following regions and their networks over time would enable analysis of how and why networks and strategies change (Ter Wal and Boschma 2008). In addition, placing a dynamic evaluation of networks against the backdrop of more thorough and fine-grained quantitative data could contribute to untangling how economic circumstances affect network development and vice versa. Finally, additional case study outside of the Upper Rhine region would also strengthen this research. Multi-case comparison would be particularly helpful in testing and strengthening the applicability of typologies or frameworks in developing place-specific policy approaches.

Understanding interregional relationships more deeply is essential in light of the current challenges in regional development, and the current trends in policy responses. Since at least the 1990s, regions have been diverging economically, with strong regions growing and weaker regions stagnating and shrinking. Because regional divergence has been identified as a threat to

economic health and to political and social stability, policy efforts continue to prioritize place-based approaches despite debate over their effectiveness and efficiency (Rodríguez-Pose 2018; Autor et al. 2020; Dippel et al. 2015; Colantone and Stanig 2016). Assessing the ways in which regions might be affected by their neighbors' economies, how they react strategically to threats or opportunities, and when and how they might balance interregional collaboration and competition are all essential components in creating good policy directives and facilitating the development of strong, place-specific policy.

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## Appendix: List of interview participants

AareLand  
Aargau Services Standortförderung  
AggloBasel  
Baden Regio  
Baselarea.swiss  
Baselarea.swiss Day One  
Basler Mieter- und Mieterinnenverband  
Duale Hochschule Baden-Württemberg  
EURES-T Oberrhein  
Fricktal Regio  
Hightech Zentrum Aargau  
Hochrheinkommission  
IGZ Zofingen  
IHK Hochrhein-Bodensee  
InnoAllianz Karlsruhe  
Innosuisse  
INTERREG Oberrhein  
Kanton Basel-Stadt Amt für Wirtschaft und Arbeit  
Kanton Solothurn Amt für Wirtschaft und Arbeit  
Karlsruhe Institut für Technologie  
L'Adira L'Agence de développement d'Alsace  
Lörrach Innovativ  
RegioBasiliensis  
Solothurner Gründerzentrum  
Trinationale Eurodistrict Basel  
Trinationale Metropolregion Oberrhein: Saule Wissenschaft  
WFL Wirtschaftsförderung Lörrach  
Wirtschaftsförderung Bad Säckingen  
Wirtschaftsförderung Grenchen  
Wirtschaftsförderung Oftringen-Rothrist-Zofingen  
WSW Wirtschaftsregion Südwest