



## **Regional Growth Paths: From Structure to Agency and Back**

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**Keywords:** Regional development; agency; path-dependency; Schumpeterian innovative entrepreneurship; institutional entrepreneurship; place leadership; economic diversification; new industrial path development

**JEL:** B52, L16; O30; R10

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# Regional Growth Paths: From Structure to Agency and Back

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## **Abstract:**

The study of regional growth paths is a key theme in economic geography and of elemental interest for policy makers concerned with regional development. Evolutionary theory explains the path-dependent nature of regional development, and points to its open-ended nature. This paper addresses the interplay between path-dependent, structural forces and the construction and utilization of opportunities through agentic processes. Extending to the evolutionary framework, it is argued that not only history but also perceived future opportunities influence agentic processes in the present and thus shape regional growth paths. Building on recent work about foresightful, strategic and distributed agency, this paper identifies three forms of agency, Schumpeterian innovative entrepreneurship, institutional entrepreneurship and place leadership, that call for and necessitate each other in the process of shaping regional growth paths. It is argued that such a holistic view is essential to understand regional development processes and in particular structural change as manifested in economic diversification and new industrial path development.

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# 1 Introduction

Increasing disparities between the main urban centres and more peripheral regions create challenges for our societies (OECD 2016; EC 2017; Iammarino, Rodríguez-Pose, and Storper 2017). Fewer, less varied and less qualified jobs are offered in the periphery. The perspectives for creating new jobs are gloomy. This triggers reallocation of (particularly skilled) labour towards main urban centres and ongoing depopulation of more peripheral regions. The main cause for the growing disparities is that economic development increasingly depends on knowledge-intensive activities, which thrive in metropolitan areas due to agglomeration economies, skill matching and knowledge spillovers. In contrast, more peripheral regions as well as regions that are specialized in traditional industries often struggle to find their place in the modern economy.

Regions have thus different preconditions to compete, innovate, and stimulate economic growth. Yet, after taking account for preconditions such as industrial structure, the size of the region, capital and labour endowments and infrastructure, a large share of regional growth differences remains unexplained (Rodríguez-Pose 2013). In other words, there are some regions that grow significantly more than could be expected given their preconditions while the opposite is true for other regions. Taking this as a point of departure, the paper contributes theoretically and conceptually to addressing the following fundamental research question:

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

Theoretically, this question is highly relevant in the recent debate on industrial path development (Boschma et al. 2017; Tödtling and Trippl 2013) and more generally in evolutionary economic geography. Boschma and Martin (2007, p. 537) remind us that evolutionary theories “must be *dynamical*; they must deal with *irreversible* processes; and they must cover the generation and impact of *novelty* as the ultimate source of self-transformation.” This underlines the importance of history for shaping regional growth paths (see also Grabher 1993). In contrast to traditional, more deterministic views, evolutionary theory foregrounds the open-ended nature of path-dependent processes (Martin and Sunley 2006) where strategic, distributed, and foresightful agency is a key driver for change (Dawley 2014). One key question that emerges from this debate is how to connect the different dimensions of time, the past, the present and the future. This question relates to another classic in social science, namely the interplay between structure and agency. Micro-processes appear to be one of the key puzzles for explaining economic evolution and structural change in regions (Asheim, Grillitsch, and Trippl 2016; Boschma 2017).

The first objective of this paper is to discuss how the past, present and future influence regional growth trajectories. To this end, it connects insights from path-dependency and strategic, foresightful agency in a single framework. Most importantly, it differentiates between regional growth paths as materialized through past actions, and the uncertain future which is shaped through agentic processes in the present. While preexisting structures enable and constrain present actions, the motivations and intentions of actors extend to perceived future opportunities (Garud, Kumaraswamy, and Karnøe 2010; Emirbayer and Mische 1998). The future can thus be conceptualized as opportunity space rather than a

projection of historically developed paths into the future. In opportunity spaces, the realization of some pathways is more likely than the realization of others depending on the regional preconditions, and actors ability to perceive and utilize future opportunities.

The second objective of this paper is to discuss the role of agency in shaping regional growth paths. It builds on the insight that distributed, strategic and foresightful agency shapes new path development (Dawley 2014; Karnøe and Garud 2012; Simmie 2012; Garud and Karnøe 2003) and connects three types of agency originating in different fields of literature: Schumpeterian innovative entrepreneurship rooted in the entrepreneurship literature, institutional entrepreneurship resting on institutional theory, and place leadership developed in the regional development literature but being inspired by the broader leadership literature. The discussion unfolds how the three types of agency contribute to constructing and utilizing opportunity spaces. Arguments are advanced how the three types of agency condition, call for, and necessitate each other, thereby constituting a trinity of change agency that is essential for shaping regional growth paths.

The paper proceeds with a discussion of the opportunity space for regional economic growth. Then, Schumpeterian innovative entrepreneurship, institutional entrepreneurship, and place leadership are discussed as key shapers of regional growth paths. Reflections about how to approach agency in an empirical setting and conclusions about future pathways for research are provided.

## **2 Opportunity space for regional economic growth**

“Explaining the growth and change of regions and cities is one of the great challenges for social science. Cities or regions, like any other geographical scale of the economic system, have complex economic development processes that are shaped by an almost infinite range of forces. There is a thorny question as to what social science should aim to do in the face of such complexity.” (Storper 2011, p. 333)

Our access to this thorny question is the wish to contribute to the understanding of regional growth in terms of jobs and income, which is the aggregate of growth in public and private sectors. Regional private sector growth in turn is the aggregate of growth in the various industries present in the region. The expected private sector growth thus equals the sum of the expected growth of the industries adjusted by their relative weight in the regional economy and their position in global production networks (Henderson et al. 2002; Coe et al. 2004). Some regions are specialized in dynamically growing industries while others are specialized in mature industries, and there are also regions specializing in several industries being in different stages in their development. Highly knowledge-intensive and innovative industries tend to cluster in space while the less knowledge-intensive and standardized activities, e.g. low-skill manufacturing, are located to more peripheral regions (Storper et al. 2016). Some regions, typically peripheral regions, may not have developed a critical mass in any industry while other regions, typically metropolitan regions, may have developed more than one specialization. These

patterns of specialization and the positions in global production networks inform expectations about regional growth paths.

The existence of regional growth paths has been explained by traded and untraded interdependencies (Storper 1995) that promote positive lock-ins as emphasized in most of the literature on clusters (Porter 1998) but may also turn into negative lock-ins, which has been subject to scrutiny in the studies on old industrial districts. Grabher (1993) identified three forms of lock-in: cognitive, functional and political-institutional. Cognitive lock-in captures the formation of a homogeneous knowledge base promoting incremental innovations but restricting the capacity for absorbing knowledge outside the field of specialization, thereby reducing the adaptability of firms and regions to changes in the environment. Functional lock-in relates to interdependencies in the value chain, which tie firms to existing production systems. Political-institutional lock-in arises due to efforts of incumbent firms to protect vested interests leading to self-sustaining coalitions between policy makers and firms supporting the status quo. Gertler (2010) and Hassink (2010) remind us that these lock-ins relate to institutional architectures at the regional, national, and supra-national scale. Similarly firms are embedded in global networks of production (Henderson et al. 2002) and innovation (Herstad, Aslesen, and Ebersberger 2014; Cooke 2012).

Path dependency implies that history and the sequence of events matter for the future development of regions. Boschma and Frenken (2006, p. 280f) remind us that “[e]volutionary theory deals with path dependent processes, in which previous events affect the probability of future events to occur.” The continuities of the past include individuals’ skills and knowledge, organizational routines, network interdependencies between individuals and organizations, and institutions (Grillitsch and Rekers 2016). These are traits, which are rigid to some extent, meaning that it takes time and efforts to change them, thus being the source for industrial and regional path-dependencies. “[D]ifferent industries within a region may be subject to quite different sources/mechanisms of path dependence, some resource based, others subject to particular externalities of localization, some tied to the inertia of large sunk costs of physical or infrastructural capital, still others subject to technological ‘lock-in’, and so on” (Martin and Sunley 2006, p. 412). This suggests that in order to understand regional growth paths, it is important to zoom in on the various industrial paths within regions, the causes of the respective path-dependencies, and possible interdependencies between the existing industrial paths.

Martin and Sunely (2006, p. 407) argue that

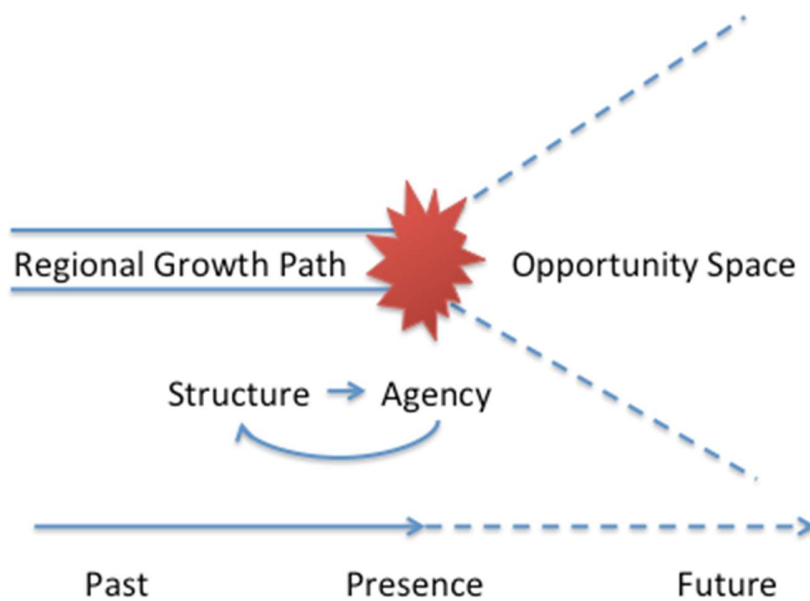
“All evolutionary processes and mechanisms could be argued to be path dependent; but not all path-dependent processes need be evolutionary. For example, increasing returns and network externalities models—including incidentally those used by Krugman and other new ‘geographical economists’ in their models of regional development—yield deterministic path-dependent outcomes but are not evolutionary [...] To be truly evolutionary, path-dependent systems also need mechanisms that generate novelty, and hence new pathways of development.”

The recent literature on new path development zooms in on the creation of such “new pathways of development”. New path development comes in many shapes, including the emergence of new industries often related to new scientific breakthroughs, the diversification of firms to new industries based on related or unrelated variety, the renewal of existing industries, as well as the importation of industrial paths from elsewhere (Martin and Sunley 2006; Grillitsch and Trippel 2016). The emergence of new paths can be understood as processes of distributed and embedded agency (Garud and Karnøe 2003). New path development is not only shaped by economic agency but rests on many kinds of agency (see also Dawley 2014), including institutional agency shaping the rules of the game and the playing field for industry-oriented efforts (Sotarauta and Suvinen 2018). “Actors mobilize the past not necessarily to repeat or avoid what happened, but, instead, to generate new options. Likewise, people imagine new initiatives for the future which then lead them to mobilize the past in support.” (Garud, Kumaraswamy, and Karnøe 2010, p. 770). This implies that regional futures can deviate substantially from what could be expected at any given point in time due to “preexisting resources, competences, skills, and experiences that have been inherited from previous local paths and patterns of economic development” (Martin and Sunley 2010, p. 20).

We conceptualize the future with the notion of an *opportunity space*, where some regional growth paths are more likely than others. The opportunity space thus resembles a funnel that is more or less open depending on the regional preconditions as illustrated in figure 1. What can be observed as regional growth path lies in the past. The future provides different growth opportunities – the path has not yet materialized. This is an important extension of the evolutionary framework, which rests on the idea that history matters. We suggest that history matters but by incorporating agency, perceived futures matter too. Structure and agency are linked in a continuous cyclical process. Agency is a process that happens in the presence, shaped by historically developed structures and perceived futures. As agency unfolds, it leaves a trail in the form of regional growth paths and structures such as regional industry mixes, local and global networks, institutions, and infrastructure.

**Figure 1: Illustration of an Opportunity Space**





The opportunity space differs by regions and time periods due to different historically developed regional preconditions and technological opportunities (cf. Lundquist, Olander, and Martynovich 2017) but also due to actors' differing capacities to detect and construct opportunities and work on them. Many factors chip in to define the regional preconditions such as the regional industry structure, institutional configurations, and regional support systems for innovation and entrepreneurship. As regards industrial structure, regions differ in their degree of specialization and diversity. Regions that are specialized in one industry might find diversification based on related or unrelated variety as the most likely form of new path development because it allows them to reuse their existing competencies in higher-value added activities while avoiding opposition of incumbent firms (Grillitsch and Trippl 2016). Conversely, diversity is supportive for the creation of completely new industries. These typically require the combination of unrelated knowledge with a high degree of cognitive and institutional distance (Boschma 2005; Strambach and Klement 2012), which is facilitated by co-location (Agrawal, Cockburn, and McHale 2006). In comparison to specialized and diversified regions, peripheral areas find fewer opportunities for diversification or the creation of completely new growth paths. For peripheral regions it is therefore often most promising to upgrade their position in global production networks or import paths from outside the region (Grillitsch and Trippl 2016).

While appreciating the regional industrial structure, Trippl et al. (2017) remind us that the required knowledge for new industrial path development can potentially be accessed from extra-regional sources. Evidence suggest the combination of regional and international knowledge networks is conducive for firm innovativeness (Tödtling and Grillitsch 2015). The extent that firms develop global linkages depends on the one hand on firm characteristics (Herstad, Aslesen, and Ebersberger 2014) and on the other hand on the position of the region in global production and innovation networks (MacKinnon 2012). Global

linkages may provide opportunities in terms of accessing complementary knowledge or compensating for a lack of knowledge available regionally (Grillitsch and Nilsson 2015). However, regions can also “become ‘locked-in’ to external networks ... controlled by TNCs [transnational corporations] ... as is evident from the experiences of branch-plant regions which became over-reliant on relatively low-value production plants, lacking more advanced functions and high-status employment as a result.” (MacKinnon 2012, p. 236)

Institutions are another important factor shaping the opportunity space. Institutions influence innovation and economic activities and thereby the development of the industrial profile of countries (Hall and Gingerich 2009; Vitols 2001). Differences in national institutions affect the nature of regional innovation systems, making certain types of new regional industrial path development more likely than others (Asheim and Coenen 2006). The creation of completely new industries may for instance be most likely in a liberal market economy and an entrepreneurial regional innovation system like Silicon Valley. Institutions such as the proverbial entrepreneurial climate have been found to affect the likelihood that perceived opportunities are pursued (Fritsch and Wyrwich 2014). Furthermore, the extent to which institutional domains overlap and are connected influences the likelihood that unrelated knowledge and resources are combined and in consequence yield structural change and new growth paths (Grillitsch 2016). Institutions also refers to policy repertoires, which are relatively stable over time and have a substantial influence whether regions with similar preconditions engage in learning and innovation, thereby realizing growth potentials, or remain in economic deadlocks (Morgan 2016).

Regional support systems for innovation and entrepreneurship comprise a number of factors that influence the creation and utilization of economic opportunities. According to the literature on regional innovation systems (e.g. Asheim and Isaksen 2002; Cooke, Uranga, and Etxebarria 1997; Tödtling and Trippel 2005) and entrepreneurial eco-systems (e.g. Isenberg 2011; Mason and Brown 2014) innovation and entrepreneurship partly depends on the provision of regional resources. Besides human capital these resources can include universities, research institutes, vocational education and training, the availability of finance (and particularly risk finance and smart money), supporting organizations such as cluster organizations, incubators, technology transfer centers, etc. The systemic perspective propagated in this literature suggests that these resources are both created and used by actors who are embedded in a web of local and extra-local networks as well as a socio-institutional context. However, innovations are not sufficient to anchor new development paths regionally. Firms may innovate in the periphery but may not find the necessary human capital to grow (Shearmur 2016), and consequently relocate to core regions. Hence, the provision or attraction of resources is especially important for anchoring and growing new industrial paths in peripheral regions (Binz, Truffer, and Coenen 2016).

### **3 Trinity of Change Agency: Three types of agency that drive regional industrial path development**

Above, we have outlined the opportunity space for shaping regional growth paths. We argue that the construction and utilization of opportunity spaces call for three types of agency. First, innovative entrepreneurship is crucial, as without actors who are capable of perceiving the emerging opportunities (Shane and Venkataraman 2000), and who are willing to take the risk, opportunities would not be realized and have any effect in a region. Second, construction of an opportunity space, more often than not, requires institutional changes for it to be rooted in regional innovation and governance systems, and therefore also risk-taking and opportunity savvy institutional entrepreneurship is added into our conceptual tool-kit. Third, an opportunity space is by definition a multi-actor construction, and also exploited by many actors, and therefore place leadership is needed to pool competencies, powers and resources to benefit both the actors' individual objectives and a region more broadly (Sotarauta 2016).

Emirbayer and Mische (1998) link agency both to the past and the future but emphasize the ways it is rooted in the present. According to them, agency is (a) "action or intervention to produce a particular effect" but also (b) "a temporally embedded process of social engagement, calling for a strong capacity to interpret past habits and future prospects" (Emirbayer & Mische 1998, p. 963). Djelic and Quack (2007) maintain that, in complex multi-actor settings, path development generates emergent qualities; the realized path is never the implementation of individual intentions – it emerges from a direct and/or indirect interaction with a whole set of them. Therefore, agency is best studied in its full complexity by situating it in long evolving development processes and structural changes of places (Sotarauta and Suvinen 2018). It should also be kept in mind that change is not usually abrupt by nature but new things creep into old structures and systems as well as related institutions (Streeck and Thelen 2005). Next, we carve out the essential features of each type of agency and especially their interrelationships, and discuss their respective roles for new path development.

#### **3.1 Innovative entrepreneurship**

Entrepreneurship is about discovering and exploiting opportunities to create value. Shane and Venkataraman (2000, p. 219) maintain that entrepreneurship as a field of study is interesting for three reasons: first, "entrepreneurship is a mechanism by which society converts technical information into [...] products and services. Second, entrepreneurship is a mechanism through which temporal and spatial inefficiencies in an economy are discovered and mitigated (Kirzner 1997). Finally, of the different sources of change in a capital society, Schumpeter (1934) isolated entrepreneurially driven innovation in products and processes as the crucial engine driving the change process." In this paper, we are most interested in the third aspect, innovative entrepreneurship as a driving force for change.

Innovative entrepreneurship in the Schumpeterian sense concerns breaking with existing paths and work towards the establishment of new ones. Hence, it is a process that may originate unexpected regional growth paths and therefore is of major concern for this paper. The unexpectedness of Schumpeterian

innovative entrepreneurship lies in the nature of the process where knowledge and resources are combined in novel ways (Schumpeter 1911), typically crossing institutional boundaries of sectors and industries (Strambach and Klement 2012). This implies that knowledge about the outcome of such experiments is limited and thus uncertain. The distinction made by Schumpeter in economic actions that are grounded in past experience as opposed to such that are driven by a belief in future opportunities is essential. The former relies on market and technological knowledge from past interactions, which is projected to the future. For the latter, the market is not known, might not even exist for a given product, and the technological feasibility is not established. The former actions will promote a continuation along existing industrial paths while the latter are attempts to break with them. In that way, a feature of the Schumpeterian innovative entrepreneur is the will to realize something new (Schumpeter 1911), to “map unknown terrain, to move where no-one dared venture before” (Weik 2011).

As Shane and Venkataraman (2000) remind us, entrepreneurship can be understood as nexus of the presence of opportunities and the presence of individuals that perceive and strive to realize these opportunities. This establishes a direct connection to the opportunity space described in the previous section. In some locations and time periods, entrepreneurs will find more opportunities than in others depending on the regional industrial composition (Boschma et al. 2017), the possibilities to tap knowledge and resources from extra-regional sources (Trippl, Grillitsch, and Isaksen 2017), the support structure for innovation and entrepreneurship (Mason and Brown 2014; Asheim and Gertler 2005), as well as the institutional environment supporting or hindering Schumpeterian innovative entrepreneurship (Fritsch and Wyrwich 2014; Morgan 2016).

This calls for action to expand the opportunity space for entrepreneurs. Indeed, in the literature on regional development, the concept of constructing regional advantage (Asheim, Boschma, and Cooke 2011; Tödtling, Asheim, and Boschma 2013) has been discussed, which refers to an active policy approach creating strong preconditions for innovation. However, much of the previous literature was concerned with promoting existing pathways while only recently the attention has shifted to a wider conceptualization of opportunity spaces for new path development (Grillitsch, Asheim, and Trippl 2017). This calls for action as regards establishing an institutional and policy environment that is conducive for innovative entrepreneurship. Morgan (2016) illustrates how an ingrained political discourse and complementarities within policy repertoires cause lock-ins. Therefore, institutional entrepreneurship, which we discuss in section 3.2, is required to facilitate new regional growth paths.

Some of the entrepreneurial ventures will succeed while many will fail. The successful entrepreneurial ventures signal to other actors that there is a market for a new, technologically feasible product or solution. This is the spark of life for potential new growth paths. However, the spark is not necessarily sufficient to establish new growth paths. Also, the growth of new paths is not the main concern of entrepreneurship literature but falls into the domain of studies on regional development and economic geography. In that context, it has been argued that such seeds for new growth paths need to be anchored in the regional environment (Crevoisier and Jeannerat 2009; Binz, Truffer, and Coenen 2016). Without the provision of sufficient resources and knowledge, firms may fail to grow or simply relocate.

This calls for a collective mobilization of resources to support the emergence and growth of new paths, which we frame as place leadership (section 3.3). This is in line with the “smart specialization” policy approach promoted by OECD (2013) and EC (2012). One of the main novelties of this approach is that entrepreneurial discoveries should guide public policy and the allocation of resources to emerging fields of specialization (Foray 2015).

### **3.2 Institutional entrepreneurship**

Schumpeter’s early theorizing acknowledged the importance of the institutional environment for entrepreneurship in modern capitalism. He saw entrepreneurship as an endogenous development force with a capacity to generate economic growth; if only institutions favoured entrepreneurial activity. In line with Mazzucato’s (2015) argument, we acknowledge the institutional influences not only constraining but also making market-related entrepreneurial agency possible. Earlier studies show that path creation may be explained both by the strong presence of entrepreneurial agency and institutional factors (Holmen and Fosse 2017; Dawley 2014; Sotarauta and Suvinen 2018). Therefore, we find it crucial to better understand how institutions change and what actors consciously do to change them so that they would better support innovative entrepreneurship and regional growth. It is institutions that frame what is suitable, and actions deviating from institutional guidance are often sanctioned, one way or another. Institutions are constraining, enabling and incentivizing structures for change but also objects of change (Soskice 1999).

In regional development studies, institutions are seen as a set of rules, regulations and constraints, on the one hand, and organizations in the form of economic, political, social and educational bodies, on the other hand (Storper 1997; Rodríguez-Pose and Storper 2006). By definition, they are the elements of permanence and stability, as they are fairly immune to change. Institutions are carriers of social practices and routines (David 1994), and institutional reproduction passes ingredients of the present and past into the future (Martin 2000). The institutional approach has been criticized for predicating compliance and conformity, and its limited capacity to explain institutional change and thus also regional transformations. Therefore, the concept has been more useful in the analysis of path dependency than path creation. This critique, for its part, has generated increasing interest in the role of agency in institutional change and thus also institutional entrepreneurship (Sotarauta and Pulkkinen 2011). Therefore, we position the concept of institutional entrepreneurship into the trinity of change agency and approach it as a force moulding rules of the game and playing fields for innovative entrepreneurs to surface and succeed.

Institutional entrepreneurs are individuals or groups of individuals but also organisations or groups of organisations, who originate change processes contributing to the creation of new institutions and/or transformation of existing ones (Battilana, Leca, and Boxenbaum 2009). As Battilana et al. (2009, p. 67) further say, “they are actors who initiate divergent changes and actively participate in the implementation of them”. Institutional entrepreneurs challenge existing rules and practices and institutionalize the alternative rules and practices they are championing (DiMaggio 1988).

Broadly speaking, Pacheco et al. (2010) identify two lines of enquiry in the study of institutional entrepreneurship. The first is based on a more sociologically oriented institutional theory that defines institutional entrepreneurs broadly as change agents that do not necessarily have a self-interest in the issues at hand. The focus is essentially on informal and socially embedded institutions; institutionalized practices and belief systems; and the processes of institutionalization and related change strategies. The second line of enquiry, according to Pacheco et al. (2010), draws upon institutional economics and sees institutional entrepreneurs as change agents driven by economic motivation and a self-interest. In this thinking, they are profit-seekers and exploiters of economic opportunity. Consequently, the focus is more on formal institutions (property rights, government policy) than informal ones, and thus also on functional and economic pressures, market conditions and transaction costs as well as contractual and self-enforcement strategies (Pacheco et al. 2010). If in the first approach the analytical effort focuses on *processes* of institutionalization, the second one is more interested in the *outcomes* of it. For our efforts to better understand the trinity of agency in regional growth, both interpretations of institutional entrepreneurship are valid, as innovative entrepreneurs may end up changing institutions with or without economic self-interest.

### 3.3 Place leadership

Institutional entrepreneurs need capabilities to determine the direction for change through, with and by other actors, convene and inspire them. Therefore, to make a difference, institutional entrepreneurs need a well-developed leadership capacity to influence across institutional and organizational divides (Sotarauta and Pulkkinen 2011). Collective action calls for a form of leadership seeking to generate, renew and sustain collective learning cycles that, as Gibney et al. (2009) maintain, are not time-limited but time-extensive. They stress that place leadership ought to be capable at looking beyond fugitive and narrow interest of individual actors and thus reach beyond short-termism. It also is expected to work to move other actors to terrains that reach beyond the 'statutory' and the 'contractual' (Gibney, Copeland, and Murie 2009).

Studies on place leadership aim at identifying the genuine, but often shadowed, processes of influence to better understand "what people actually do to influence other people in these very particular types of settings both formally and informally – openly as well as opaquely – and how they go about doing what they do. It is also about revealing the types of social processes involved in 'making things happen' and in 'getting things done' (or not getting things done)" (Sotarauta, Beer, and Gibney 2017). We find this important, as, in the context of regional development, we are called for to see leadership in a new light and to fill the conceptual and empirical gap between the fallacious heroic leadership discourse and what really happens in regions (the need to go beyond heroic leadership is widely recognized, e.g. Reicher, Haslam, and Hopkins 2005).

There is an abundant reservoir of leadership theories and practices constructed for single organisations but they just do not offer much for regional development. In regional development, the capability to orient complex multi-actor processes in an indirect manner is the key for successful efforts to influence

the emergence of new paths (MacNeill and Steiner 2010). Sotarauta and Beer (2017, p. 212) argue place “leaders as individuals, and groups of individuals, tend to possess a greater range and depth of assets – including commitment to advancing the region - than other actors”. As such, place leadership comprises varying approaches but is intrinsically concerned with (a) launching and guiding interactive development work that crosses the many organizational boundaries and professional cultures, and (b) guaranteeing the versatile engagement of various stakeholder groups and helping them to both contribute to and take advantage of development processes and their fruits (Gibney, Copeland, and Murie 2009; Collinge, Gibney, and Mabey 2015).

Almost as a general rule, various actors participate in regional development efforts aiming at finding something for themselves, they do not leave their own interests, drivers, incentives and overseers behind, on the contrary. Thus, it is far from easy to find a common ground for a collective development effort in these kinds of situations. Regional development, and related institutional changes, is essentially about a sustained blunder between various visions of single organisations, individual interests and a whole range of ideas. Contrary to fairly generally shared assumption, it is notoriously difficult to construct a shared vision providing a heterogeneous bunch of actors with a sense of direction. Genuine place leaders move into interactive leadership spaces and work to find third solutions that reach beyond individual ambitions, intentions and interests. And here, the truly influential actors are capable of drawing the attention of other actors to the strategic issues requiring action (Heifetz 1994). Of course, to do so, they need to merit an influential (but not always formal) position in the social fabric of place. Place leaders need to find a way to access a wide range of actors and influence networks relevant to their respective regions (MacNeill and Steiner 2010; Sotarauta 2016).

### **3.4 How to approach agency?**

The kind of approach discussed in this paper locates agency not in the attributes of individuals but in the relationships connecting actors in regional structures, specific regional paths and change processes. The emerging property of regional paths in time and space are in the center of attention. The three forms of agency contribute in their own way to constructing and exploiting opportunity spaces, thereby continuously forming regional growth trajectories. To understand these kinds of change processes it is important to ask: How do different actors deal with change? What kind of change strategies do they launch? What is the combination of change strategies they adopt in specific situations at specific times? How do they resolve the paradoxical situation in which they aim to change those structures that frame their very actions? How can actors innovate and renew institutional settings if the very institutional environment they wish to change determines their beliefs and actions? How do they earn/take their positions? Who are the key actors in different contexts? (cf. Sotarauta and Pulkkinen 2011).

These are far from easy questions to answer, as agency is often shadowed by such visible forms of influence as structures and formal institutions, as well as development programs and plans (Sotarauta 2016). The difficulty in answering these questions may also be due to the fact that agency is an emergent property of interacting individuals (Bennett et al. 2003), and as such it often is arduous to identify the

institutional influencers as well as leaders and their followers, not to mention their relationships (Trickett and Lee 2010; Huxham and Vangen 2000). All too often formal authority and institutional power are seen as markers of influential agency, and more hidden and emergent sides of it remain overshadowed. Of course, it is not only easy but also attractive to focus on influential and visible actors with formal authority and strong social positions. However, understanding the dynamics of concealed ways of influence is as important to influencing regional growth patterns as the formal policies.

Although agency is often approached as a formally constituted hierarchical power, in the context of regional growth - characterized by many kinds of overlaps and distributed power as well as conflicting or mutually supporting policies and ambitions – it is to be approached from three perspectives: (a) *the process perspective* informs a study on temporal dynamism of path development, (b) *the network perspective* brings in the fabric of social relationships in and beyond a specific path development processes and (c) *the governance perspective* focuses on the systemic issues that frame path development as well as forms of agency (Sotarauta 2016; Sotarauta and Pulkkinen 2011).

The main challenge, in our understanding, is to complement the structural analyses with agency oriented studies that inform us about micro level dynamism. Consequently, there is a need to (a) gain better understanding of the ways actors work to construct opportunity spaces, (b) identify how historical paths constrain and enable the construction of opportunity spaces, (c) unveil how actors demolish, renew, or build structures/institutions in response to projected possible futures, (d) identify the change strategies underpinning the three forms of agency, (e) understand how multifaceted agentic processes play together – positively or negatively – in shaping regional futures. A more explicit focus on the trinity of change agency might offer a conceptual lens in these efforts by seeking for a balance between structure and agency. We rely on a bottom-up view on structures, institutions and agency that complements the dominant top-down view (Grillitsch 2015; Sotarauta 2017). By adopting a bottom-up view on regional growth and related institutions and agency, we might find out that the significance of structural preconditions shaping path development varies greatly between not only regions but also actors.

## 4 Conclusion

We advance a twofold proposition: (a) some regions grow more than others with similar structural preconditions, as they have been able, one way or another, to construct and exploit opportunity spaces that are embedded in existing industrial compositions, local and global networks, the regional support system for innovation and entrepreneurship as well as institutional arrangements peculiar to a region in question. For this purpose, (b) the trinity of change agency explains why some regions are more successful than others in their efforts to construct and exploit such opportunity spaces.

The notion of *opportunity space* extends from the existing structural preconditions to potential futures. It extends from regional preconditions to potential novel combination of regional and extra-regional knowledge, resources and institutions. Innovative entrepreneurship is seen as essential form of agency



to act upon these perceived opportunities with the strong ambition to making them happen. Innovative entrepreneurship in the Schumpeterian sense implies the will to move into unknown terrain, to break with existing growth paths. In that sense, it is a fundamental source for change in a capitalist society and key to our understanding for why some regions exploit new growth paths while others don't.

Entrepreneurial opportunities, however, are not distributed evenly across space and time. Some regions in some periods will offer more entrepreneurial opportunities than others. This calls for other forms of agency that are beyond innovative entrepreneurship. Place leadership and institutional entrepreneurship are introduced as essential for constructing the opportunity space and nourishing emerging new growth paths. The paper has elaborated why and how these types of agency together with Schumpeterian innovative entrepreneurship are interconnected in a synergetic relationship constituting the *trinity of change agency*. The trinity of change agency is a holistic conceptual framework that is derived by necessity, i.e. theoretical arguments why one form of agency calls for or necessitates the other. Together, they are the shapers of regional growth paths beyond the expected.

We believe that the conceptualization proposed here helps to understand the dynamics of regional development processes by connecting structure and agency, the past and the future. It breaks with a deterministic view of path-dependency and shifts attention to how – at any moment in time – the future is shaped in an agentic process. Agency is conditioned by the past but the envisioning of potential futures and the willful realization of perceived opportunities are sources for unexpected and unforeseeable trajectories. The construction and exploitation of the opportunity space is perceived as a social process, which is embedded in regional and extra-regional networks and governance structures.

This perspective also opens up for a new way of approaching and analyzing regional development patterns. It suggests that it would be interesting to identify and study regional growth paths that diverge from what could be expected given the existing industrial composition, regional support structure for innovation and entrepreneurship, and institutional arrangements. It is worth noting that empirical regional growth models hide such diverging growth paths in the residuals, which typically are not discussed further. This is because the residuals are thought to be stochastic, random noise whereas the main interest lies on the structural characteristics of a region to explain regional growth. The argument advanced in this paper is that the diverging growth paths can be interesting conceptually and theoretically, potential showcases of the trinity of change agency.

This calls further for an investigation of the agentic processes, their embeddedness in multi-scalar networks and governance contexts, which are behind shaping regional growth paths. While conceptually the three types of agency are connected in a synergetic manner, this may manifest in very different forms. This ranges from a single individual engaging in all three forms of agency to a very distributed form where place leaders, institutional entrepreneurs, and innovative entrepreneurs act without direct contact to each other. Such distributed agency, however, should not conceal that actions independent for the naked eye affect the shared environment, the opportunity space, and thereby the possible regional futures.

These manifestations of the trinity of change agency may also vary by regional and temporal context. In a small peripheral region, the emergence and growth of new paths may be – in a much more direct manner – depend on the mobilization of all three forms of agency than in large metropolitan regions. This is because resources for growth; most importantly human capital; is scarce in peripheral regions. Accordingly strong collective efforts beyond innovative entrepreneurship may be required to build such resources to start but also grow an entrepreneurial venture. In comparison, in a metropolitan region, the single entrepreneur may find all resources required to start and grow a firm. Cumulative processes may then unfold without direct engagement with place leadership and institutional entrepreneurship.

Furthermore, in the context of regional development, the implications of the trinity of change agency do not need to be reduced to achieving outstanding economic growth. Think about a rural community or even communities in developing countries with poor structural preconditions. The trinity of change agency is then about expanding and utilizing the opportunity space where even small but viable businesses will contribute to regional development and enhance the structural precondition for further development.

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