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# *Agency, networks and complexity: The many roles of academic institutions in regional development coalition building*

Este artículo aborda el creciente papel de las coaliciones de desarrollo regional como catalizadores de la renovación institucional y la creación de capacidades a nivel local. Las coaliciones de desarrollo regional pueden, en general, caracterizarse como actores que operan entre límites sectoriales, institucionales y organizativos, compartiendo intereses comunes y reuniéndose en torno a una visión conjunta de desarrollo regional. El auge de las coaliciones de desarrollo regional está intrínsecamente asociado a la necesidad de marcos de gobernanza y liderazgo más flexibles y que operen a diferentes niveles; que sean de naturaleza multi-direccional –combinando enfoques de arriba abajo y de abajo arriba– y estén enfocados a mejorar la resiliencia general de las instituciones locales. La base conceptual del artículo se sustenta en trabajos recientes sobre liderazgo regional. Empíricamente, y teniendo en cuenta el planteamiento de este número, nos centramos en la puesta en práctica local de un programa nacional para estimular la innovación regional, inspirado por la colaboración tripartita entre la universidad, la industria y el gobierno local en el sur de Noruega.

*Artikulu honek, instituzio eraberritzerako eta toki-mailako gaitasunen sorrerarako katalizatzairen gisa eskualde garapeneko koalizioek duten eginkizun gero eta handiagoari heltzen dio. Eskualde garapeneko koalizioak, oro har, muga sektorialetan, instituzionaletan eta antolaketa-muguetan jarduten duten eragile bezala dihardute. Hori egiterakoan, interes komunak partekatzen dituzte eta eskualde garapenaren ikuspegi orokor baten inguruan biltzen dira. Eskualde garapeneko koalizioen gorakada hertsiki lotua dago maila desberdinetan aritzeko gai diren gobernantza-esparru eta lidergo malguagoen beharrizanarekin; norabide anitzeko izaera izan behar dute –goitik beherako eta behetik gorako ikuspegiak konbinatuz– eta tokiko instituzioen erresilientzia orokorra hobetzeko ikuspegia. Artikuluaren oinarri kontzeptualak eskualde lidergoaren inguruko berriki egin diren lanetan du funtsa. Enpirikoki, eta zenbaki honetako planteamendua kontuan hartuta, eskualde garapena sustatzeko programa nazional bat tokian tokiko praktikan jartzean arreta jarri dugu. Norvegia hegoaldeko tokiko gobernu, industria eta unibertsitatearen arteko lankidetza batean inspiratuta.*

This paper focuses on the increasing role of regional development coalitions as catalysts for institutional renewal and capacity building at the local level. Regional development coalitions can, broadly speaking, be characterised as actors working across organisational, institutional and sector boundaries, sharing common interests and rallying around a joint vision for regional development. The rise of regional development coalitions is intrinsically associated with the need for more flexible, multi-level governance and leadership frameworks that are multi-directional in nature –combining «top-down» and «bottom-up» approaches– and aimed at enhancing the overall resilience of local institutions. The paper's conceptual basis builds on recent work around regional leadership. Empirically, and given the focus of the special issue, we focus on the local implementation of a national programme for stimulating regional innovation, inspired by the tripartite collaboration between academia, industry and local government in Southern Norway.

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**Palabras clave:** liderazgo regional, Gobernanza colaborativa, coaliciones regionales, sistemas regionales de innovación, universidades, institutos de investigación.

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**1. INTRODUCTION**

There is a growing awareness amongst policymakers and the scientific community alike that the challenges facing societies, regions and localities require the development of collaborative governance structures and multi-actor frameworks (Ansell and Gash, 2008; Andres and Chapain, 2013). Collaborative governance focuses on public policies and issues and pertains to «an explicit and formal strategy of incorporating stakeholders into multilateral and consensus-oriented decision-making processes» (Ansell and Gash, 2008, pp. 547-548). Over the years, national governments in Europe and beyond have devised mechanisms to promote collaborative governance at multiple levels: within local government (Bache and Chapman, 2008), across sectorial boundaries (Vangen *et al.*, 2015), via the active participation of citizens (Ghose, 2005), in the form of public-private partnerships (Andersen, 2004), etc. Earlier studies have identified a set of structural and cultural challenges hampering such policy ambitions. These include institutional barriers (Ali Memon and Kirk, 2010), power and/or resource imbalances amongst stakeholders (see Ansell and Gash, 2008, pp. 551-552), inadequate

incentive systems (Ebrahim, 2004), the lack of an overarching framework for coordinating activities (López-Santana, 2009), the absence of a joint agreement or vision (see Ansell and Gash, 2008, pp. 560-561) and normative and cultural clashes amongst actors belonging to different institutional spheres and pursuing diverging strategic aims (Leibovitz, 2003; Donahue and Zeckhauser, 2011). Notwithstanding this, critical success factors underpinning collaborative governance arrangements include *starting conditions*, such as a prior history of collaboration (trusty relations) and adequate incentives; *institutional design elements*, such as participatory inclusiveness, clear ground rules and process transparency; and *facilitative leadership structures*, including actors' empowerment (Ansell and Gash, 2008, p. 550).

Few studies have thoroughly investigated the inner dynamics and mechanisms underpinning the emergence, development and diffusion (institutionalisation) of collaborative governance structures and arrangements geared toward leveraging regional innovation systems (RIS). Although our point of departure is the rise of collaborative governance, the paper's conceptual frame of reference is the emerging literature on regional or place-based leadership, with an emphasis on the role played by regional coalitions. Empirically, we shed light on the dynamics facing a regional coalition in the South of Norway, against the policy backdrop of a government-mandated national programme to stimulate regional innovation throughout the country's regions. The research questions driving our inquiry are as follows:

*How do regional coalitions –involving partners from a variety of sectors and institutional spheres– form and evolve over time?*

*What role do knowledge actors such as universities and research institutes play in such collaborative arrangements?*

Our approach is qualitative in nature, based on the desktop analysis of policy documents and evaluation reports as well as direct observations in the context of the authors' own involvement with the programs in question. We apply a case study design (Yin, 2009) aimed both at exploring and explaining in-depth a single phenomenon. The paper is organised as follows. First, we sketch out the key elements composing our conceptual framework. This is followed by a discussion on methods and the choice of case. We then present empirical evidence and discuss it in the light of theory and the existing literature on the topic. We conclude by providing some policy recommendations as well as suggestions on future studies.

## 2. REGIONAL LEADERSHIP AND REGIONAL DEVELOPMENT COALITIONS

As is the case across a multiplicity of social science fields, regional scientists have recently acknowledged the role played by *institutions*, i.e. sets of formal and/or informal rules (Scott, 2014), in processes of regional governance and development (Rodríguez-Pose, 2013; Morgan, 2007). Rules are important since they both enable

and constrain the behaviour of actors in a given social setting (March and Olsen, 2006). That said, actors –either acting individually or in a group (e.g. in the context of formal organisation)– are not passive recipients and thus take active steps to alter or replace such rules when they are seen as inappropriate and/or undesirable (Mahoney and Thelen, 2010; Battilana *et al.*, 2009). Yet, in order to do so, actors require two important elements. The first is social standing and/or legitimacy (Battilana, 2006), drawing to themselves other supporting actors or coalitions. The second is the direct command of resource pools: people, money or both (Hackman, 1985; Covalski and Dirsmith, 1988).

Leaders, both formal and informal, play an important role in devising or shaping the institutional context in which social (inter)action occurs (Collinge and Gibney, 2010). Sotarauta *et al.* (2012) contend that leadership is a multi-agency and multi-level endeavour that «is present on different scales and is shaped differently according to various institutional and cultural contexts» (p. 1). There are those suggesting that leadership might be the critical factor in explaining why certain places (localities and/or regions) are economically successful when compared to others (Rodriguez-Pose 2013; Normann, 2013). That being said, it is important to stress that the emerging literature on regional leadership is not yet mature, largely consisting of case studies, many of which are theoretically and conceptually incoherent. However, there is ample evidence in the literature of the transformative effect this type of agency can have on regional economic restructuring processes. Some examples include the following: North Carolina, 1956-present (Audretsch, 2015; Link and Scott, 2003; Link and Siegel, 2005); San Diego, 1990-present (Audretsch, 2015; Walshok and Shragge, 2013); Spain's Basque Country, 1995-present (Audretsch, 2015; Karlsen and Larrea, 2012); Finland's «Oulu phenomenon», 1980-2000 (Teräs, 2008; Hyry, 2005; Morris *et al.*, 2008); Norway's Agder-region, 1990-2004 (Normann, 2013; Normann, 2007); and Norway's Stavanger-region, 1990-2011 (Normann, 2013; Hidle and Normann, 2013).

Both the mobilisation and coordination of people and resources require leadership, and this is particularly salient when it comes to network arrangements (Sotarauta, 2014b). In the regional development literature, the concept of «regional leadership» has emerged as an attempt to combine insights from economic geography (Boschma *et al.*, 2017) and institutional theories (Sotarauta, 2014a; Sotarauta, 2014b; Sotarauta *et al.*, 2012; Beer and Clower, 2014; Beer, 2014; Audretsch, 2015; Normann, 2013). In this setting, we can identify regional leaders as skilled social actors with highly developed cognitive capacities for reading people and environments, framing lines of action and mobilising people in the service of broader conceptions of the world and themselves. However, the defining characteristic of a regional leader is not the entrepreneurial activity or influence exerted in the regional leader's resident organisation but rather the influence exerted on other spheres transcending institutional and organisational borders (Normann *et al.*, 2017). An example of leadership that transcends institutional

spheres regionally could be a regional cluster manager who is able to align industry strategy with regional university strategy, e.g. in developing a joint educational programme or research centre (Normann *et al.*, 2016). Recent inquiries from Northern Europe show that local coalitions involving a multiplicity of actors and geared towards regional development are laden with tensions and contradictions (Benneworth *et al.*, 2016), and that there is a need for better understanding regarding how such coalitions first emerge and further develop over time (Sotarauta *et al.*, 2017). In this paper, we conceive of a regional development coalition as actors sharing common interests and working across institutional, organisational and/or sector-wide boundaries with the aim of fostering regional economic development (Asheim, 2001; Johnsen *et al.*, 2005; Benneworth, 2007; Gustavsen *et al.*, 1998).

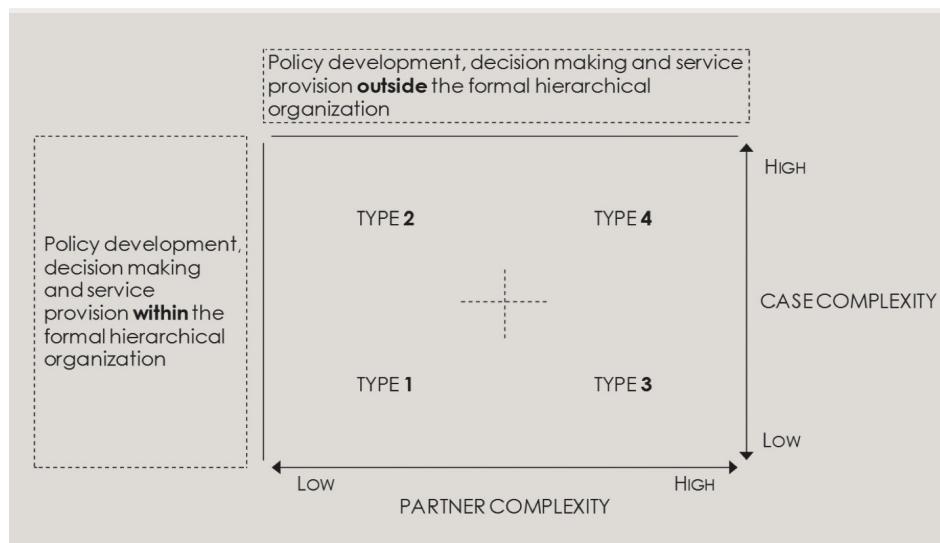
### 3. REGIONAL DEVELOPMENT COALITIONS AS NETWORK ARRANGEMENTS

Discussions describing and conceptualising developmental dynamics within network-type arrangements (e.g. regional clusters, public–private partnerships, regional development coalitions) have received considerable attention in the last decade (Sørensen and Torfing, 2008b). Some of this literature builds on a key topology developed by Powell (1990), where he identifies the network form of organisations as being categorically different from either markets or hierarchies. A key finding here is the function that interdependence can play in the establishment and development of networks. In the absence of formal authority (hierarchy) or market mechanisms, interdependence becomes the glue that forges network collaboration. One can understand network interdependence as a function of the extent to which participants understand that they are dependent on other network participants for realising individual and shared goals (Fosse and Normann, 2017). Accepting this premise, a key issue facing regional development coalitions (and other network arrangements for that matter) pertains to the extent to which (both *if* and *how*) interdependence can be designed or constructed ex-ante (Normann, 2007; Fosse and Normann, 2017).

The literature on the topic suggests that there is not one clear path for developing interdependence, with many different approaches being discussed. Network governance researchers have highlighted the importance of meta governing (Sørensen and Torfing, 2008a). Network theorists such as Putnam (1995; 2000) have pointed to the function played by bonding social capital and trust. Political scientists have shed light on the importance of legitimacy and accountability, for example, as factors influencing the performance of partnerships (Aars and Fimreite, 2005). Philosophers have, instead, pointed to the role played by deliberation and dialogue in networks (Dryzek, 1990; Dryzek, 2008; Gustavsen, 1992). Other scholars have illuminated the importance attributed to certain agents such as «network facilitators» or «brokers» (Klijn *et al.*, 2010; Gould and Fernandez, 1989).

Given the scope and the research questions addressed in this paper, the focus is on two structural elements characterising regional development networks, namely, *case complexity* and *partner complexity*. Both types of complexity are here assumed to be linked to the social construction of network interdependence and mediated by social capital and leadership such that an initially high degree of case and partner complexity, all other things being equal, is associated with more complexity in creating or identifying network interdependence. Overcoming the challenge of creating network interdependence is thus an important task for the leadership in a regional development coalition. Social capital also mediates this relationship so that mature networks, characterised by high levels of bonding social capital or trust, are, all other things being equal, likely to be able to more efficiently deal with a high level of complexity regarding both the development agenda and partner configurations. In contrast, immature or early-stage collaborative initiatives tend to have higher chances of success if/when they start out with cases (development issues) that are relatively unambiguous in terms of who does what, when and how; and also in those circumstances when the cognitive distance between agents (partner complexity) is relatively low. Such relations are schematically outlined in figure 1.

Figure 1. A NETWORK TYPOLOGY



Source: Authors.

A point to consider with this model is that a type 4 configuration is required to address what were labelled *wicked problems* by Rittel and Webber (1972). However, even if networks such as regional development coalitions might be well suited to address wicked problems, partners may suffer from inactivity, frustration and even in-

ternal conflicts if they start out working here if they lack sufficient social capital or leadership capabilities for creating shared understandings of interdependence. In contrast, partners beginning in a type 1 configuration risk being criticised both by external and internal parties for their lack of ambition. Recent studies on goal formulations amongst regional councils in Norway show that most of these partnerships (about 70%) have goals that are unsuited for fostering partners' interdependences (Kyllingstad *et al.*, 2017). This could be interpreted as an indication that these types of public–public networks tend to be placed in either type 2 or type 4 configurations. While leadership can support network partners in developing goals that can enable the development of interdependence, the difficulty of doing so increases from «difficult» in a type 1 setting to «very difficult» in a type 4 setting, where there is little experience of collaboration and knowledge of each other or trust (social capital) upon which to base further work. Therefore, a key task of leadership in such settings is to support the network, e.g. a regional development coalition, in such a way that its internal composition and tasks match the goals around which the participants can construct interdependence.

## 4. REGIONAL DEVELOPMENT COALITIONS IN SOUTHERN NORWAY

### 4.1. Institutional context

Norway's programme for Regional R&D and Innovation (VRI) was launched in 2007 as a 10- year national programme run under the auspices of the Research Council of Norway (RCN). According to its statutes, «The programme is designed to promote greater regional collaboration between trade and industry, R&D institutions and the government authorities, and to establish close ties to other national and international network and innovation measures» (The Research Council of Norway, 2006). Key components of the programme include research activity, exchange of experience, learning and cooperation across scientific, professional and administrative boundaries. VRI initiatives must have backing from a so-called «regional partnership», consisting of representatives from trade and industry, R&D institutions, public authorities, local funding agencies, etc. The former is responsible for the overall organisation of activities under a specific regional VRI initiative. As of today, a total of 15 VRI initiatives across the country have been funded with approximately NOK 70 million annually and matched with a similar amount by the regions. Each regional initiative has its own priority areas set in accordance with local characteristics, future needs and strategic ambitions.

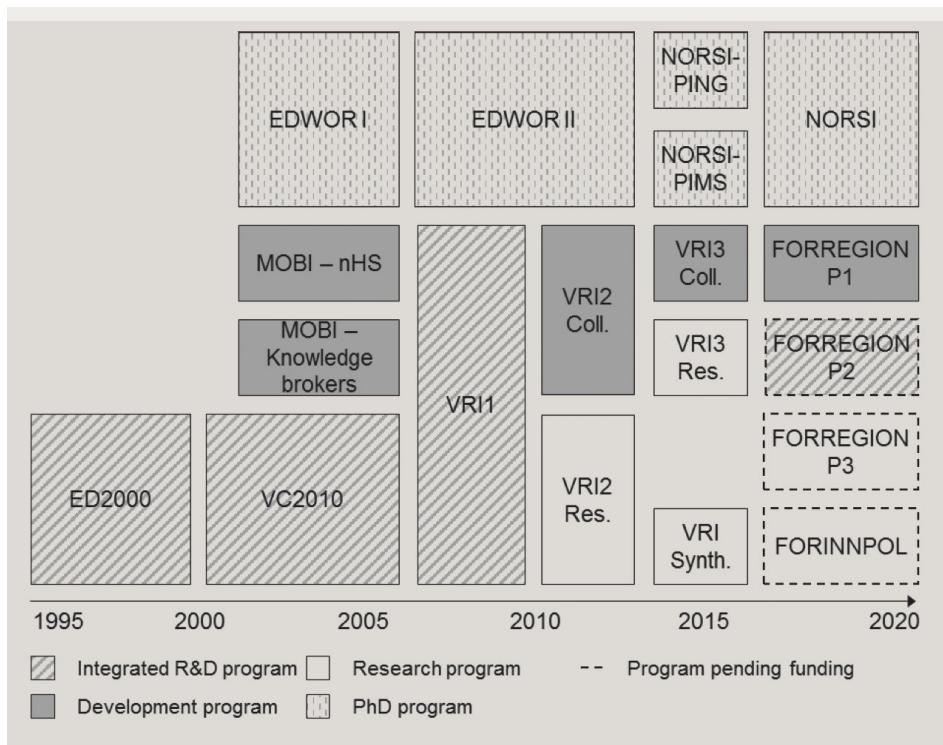
### 4.2. Historical trajectory

The Scandinavian tradition of work-life research has had a long history in Southern Norway, also known as the Agder region (Normann *et al.*, 2008). It began in the 1960s with the «The Industrial Democracy Project», in which Fred

Emery and Einar Thorsrud (among others) worked to redesign work organisations in several field experiments, including Hunsfos Pulp and Paper Mill in Vennesla municipality in Vest-Agder County (Emery and Thorsrud, 1976; Fosse, 2010). However, the concept of a regional development coalition did not emerge before the mid-1990s, when a researcher permanently working in the Agder region became directly involved in this research tradition. Researchers at the former Agder University College, together with researchers from Agderforskning, a private not for profit regional science institute, worked on a new national programme titled «Enterprise Development 2000» (ED2000). This project was also one of the first research council projects awarded to researchers from the Agder region. The former was an action research project (see Stringer, 2007; Levin, 2002) that focused on topics such as broad participation, working life, the Norwegian model, etc. and had tripartite collaboration as a shared focus. ED2000 was a programme that had both research and development aims.

In 2001, this research and development programme was replaced by the Value Creation 2010 programme (VC2010). In this RCN program, not only the firm but also the regional context was identified as areas of study and development. In this period, RCN also started a national PhD programme (EDWOR) linked to VC2010. Parallel to this, the Programme for Mobilisation of R&D-related Innovation (MOBI) was initiated. The latter programme had two parts: one developmentally oriented, focused on creating networks between the university college and the regional industry (MOBI – nHS), and another (MOBI-competence brokering) centred on identifying local academics to support firms in addressing concrete business development problems. In 2007, the third cycle of RCN programmes linked to the Scandinavian tradition of work-life research was initiated under the VRI heading. As was the case in previous rounds, VRI was anchored, steered and partly funded by a regional development coalition composed of representatives from regional industry, the university, research institutes, incubators, social partners, regional funding agencies, individual researchers, municipalities and the counties. The VRI programme thus emerged from the merger between the two MOBI programmes (nHS and competence brokering) and VC2010, and all the partners from these projects were now also included in the new programme. It is interesting to note that the RCN's decision to merge the programme resulted from the recommendations by VC2010's programme evaluators. The external evaluators had concluded that the VC2010 programme was too complex in its configuration (Arnold *et al.*, 2005). What is more, the topics covered were also expanded to include working life research, cultural industries, cluster development, regional innovation research, universities' regional role, etc. Thus, both partner and case complexity in the regional development coalition in Agder have increased with the transition from VC2010/MOBI to VRI.

Figure 2. PROJECTS STEERED AND LINKED TO THE R&D COALITION IN AGDER, 1995-2020



Source: Authors.

In the first phase, VRI-1 (2007-2010), all programmatic activities were executed under the umbrella of one integrated R&D project. In the second period, VRI-2 (2011-2013), the project was split into two (separating «R» from «D») to reduce complexity. This was continued in the third and last phase (2014-2016), but expanded with a new PhD programme (NORSI) and a new research project without regional partnership involvement (VRI synthesis). Following VRI, two new programmes –FORINNPOL and FORREGION– were launched by RCN. FORREGION has many similarities to the old MOBI program. Part 1 is steered by the counties, focusing on competence brokering, and part 2 is steered by the university, focusing on how research and education can be amended to path development in the regional industry. FORINNPOL is more research oriented and builds in part on the innovation research programmes executed in VRI. A summary of programme developments underpinning work of the regional development coalition in the Agder region is given in the table below, where we attempt to operationalise partner and case complexity in the different programme phases.

Table 1. PROJECTS STEERED AND LINKED TO THE R&amp;D COALITION IN AGDER: SUMMARY OF KEY FINDINGS

Program	Period	Type	Scope	Partner complexity	Case complexity	Result/continues as
The Industrial Democracy Project (IDP)	1960s–70s	Research project (socio-technical)	Improvement of one firm at the time	<i>Low</i> ; only researchers and participants from one firm	<i>Low</i> ; Organisational development in one firm	Programme results in the now classical socio-technical study Democracy at work (Emery and Thorsrud, 1976)
ED2000	1996–2000	Research and development project	Improvement at firm level, some network developments.	<i>Medium</i> ; both a regional partnership and researchers are involved.	<i>Medium</i> ; development of working life in one region	Programme is continued. Research dissemination
VC2010	2001–2007	Research and development project	Firm level development, network development and regional development	<i>Medium</i> ; new academic research traditions are included (regional)	<i>High</i> ; expansion both in theme and scope	After a local conflict it is recommended that the programme be reconfigured (Johnsen and Normann, 2004). Programme is continued as VRI
MOBI-nHS	2002–2006	Development project	Stimulate innovation in firms with little R&D experience through collaboration with academic institutions	<i>Low</i> ; governed by Agder University College (AUC)	<i>Low</i> ; only addresses linkages between AUC and regional industry	Programme is continued as VRI
MOBI-competence brokering	2002–2006	Development project	Stimulate innovation in firms with little R&D experience through collaboration with academic institutions	<i>Low</i> ; governed by Agderforskning	<i>Low</i> ; coupling of individual researchers with individual firms	Programme is continued as VRI
EDWOR 1&2	2003–2013	PhD programme	PhD education linked to VC2010 and VRI	<i>Low</i> ; PhD students and their supervisors	<i>Low</i> ; graduate training	PhD programme governed by NTNU. Approximately 35 PhD candidates.

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Program	Period	Type	Scope	Partner complexity	Case complexity	Result/continues as
VRI1	2007–2010	Research and development project	Firm level development, network development, regional development, cultural industries development, process industry development and research.	High; many partners	High; many development goals limited resources.	Resulted in a separation of R & D - research and development in VRI 2
VRI2 collaborative	2011–2013	Development project	Firm and cluster development in culture, energy and process industries	Medium; fewer actors than in VRI1	Medium; still relatively broad scoped but without research.	Was continued in the same format as VRI3 collaborative
VRI2 Research	2011–2013	Research project	Regional innovation research	Low; two external partners	Low; research driven and steered activities	Production of academic publications. Was continued as VRI3
VRI3 collaborative	2013–2016	Development project	Firm and cluster development in Culture, energy and process industries	Low; similar actors as in VRI2	Medium; approximately similar set up as in VRI2	Continued as FORREGION
VRI3 Research	2013-2016	Research project	Regional innovation research	Medium; five external partners	Low; research driven and steered activities	Production of academic publications approximately 50 international journal articles. Continued as FORREGION/FORINNPOL
NORSI-PIMS & NORSI-PING	2013-	PhD-program	PhD education linked to VRI	Low; PhD students and their supervisors	Low; graduate training	PhD programme governed by NTNU and BI. Approximately 50 PhD-candidates
VRI Synthesis	2013-2016	Research project	Regional innovation research	Low; researchers only	Low; research driven and steered activities	Production of academic publications. Continued as FORREGION/FORINNPOL

Source: Authors.

## 5. DISCUSSION

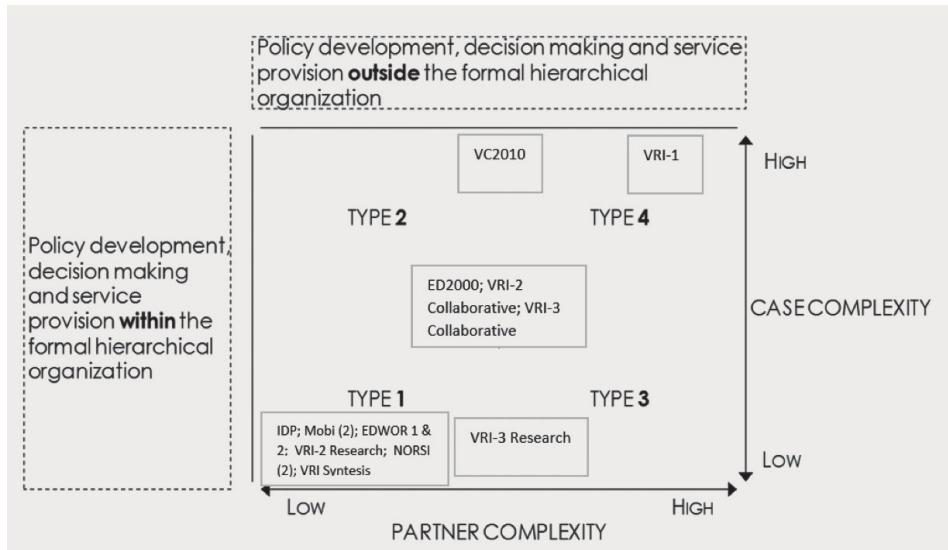
The data presented above –and succinctly visualised in figure 3– show that the majority of projects governed by Agder’s regional R&D coalition in the last fifteen years are characterised as *low* in both partner and case complexity (type 1). This, in combination with some continuity at the individual level in the regional development coalition governing these programmes, has allowed for social capital and trust to develop in the region. That said, an interesting downwards movement is detected over time, with earlier endeavours (VC2010 & VRI1) having higher degrees of both case and partner complexity when compared to more recent developments. The observation that VRI1 represents more complexity for the regional development coalition than MOBI and VC2010 is relatively uncontroversial. All program activities and regional stakeholders participating in previous programs are now supposed to participate and coordinate their activities in the new VRI program. In addition, the case complexity increases as new development topics are added, and is subject to both research and development. This represents a challenge for the regional leadership in the regional development coalition as well as the project participants. There had therefore been a gradual but steady move from high towards lower levels of case complexity, as illustrated by the VRI initiatives and the respective lessons learnt over time.

Activities aimed at cluster development and cross-sector collaborations are located in the middle of the model; what could be characterised as a new «type 5» sweet spot. In contrast, support coalitions aimed at institutional capacity building over the long run (e.g. education and partners’ bilateral relations) tend to rank low in both partner and case complexity. This seems to suggest that an «ideal type» vibrant regional coalition ecosystem would be composed of a diversity of local initiatives with differing degrees of complexity, yet gradually moving from type 1 to types 5 and 4. Interestingly both types 2 and 3 seem to have been under-explored in the case of Agder, tentatively suggesting that case and partner complexity go hand in hand, i.e. when one is high the other also tends to be high, and vice versa. It is interesting to note that the regional development coalition, in collaboration with the Research council of Norway, seems to have self-corrected when complexity in both partner and case becomes so high that it becomes unmanageable. Such corrections can be viewed as critical interventions resulting from joint learning, thus pointing to emerging strategic postures by the regional leadership (Sotarauta, 2015; Sotarauta *et al.*, 2012a). In the Agder case, such strategic interventions secured a less ambitions yet more workable developmental agenda in the R&D-field.

There are many challenges for regional leadership seeking to utilise regional development coalitions as mechanisms for realising developmental aims. These include, but are not limited to, regional institutional capacity, industrial structure, strategic orientation of regional policymaking, competence (broadly defined), national and international policy and regulations, marked situations and social capital. A key regional lead-

ership challenge is the fact that regional development coalitions must create the conditions for supporting partners in agreeing upon shared goals and clearly identifiable roles and responsibilities (Christensen, 1985). As a process, the regional development coalition must be supported in its transition from a highly ambiguous arrangement akin to an organised anarchy (Thompson and Tuden, 1959; Cohen *et al.*, 1972) towards a situation where roles are clearly defined and accepted by all the agents involved, and where the adopted goals foster a multiplicity of reinforcing interdependencies among the participants (Fosse and Normann, 2017).

Figure 3. COMPLEXITY OF REGIONAL COALITIONS IN AGDER



Source: Authors.

A development coalition that successfully addresses the «goals and roles» challenge can, pending external shifts and access to necessary recourses, systematically work towards realising its goals. However, as illustrated in figure 1, the challenge of successfully addressing «roles and goals» for the regional development coalition increases with both the complexity of the work undertaken as well as partner complexity. However, both of these conditions are mediated by social capital (Putnam, 2000). When people learn to know and trust each other, more complex and difficult work can successfully be undertaken as a collective endeavour.

The programme history and gradual evolution of the regional development coalition relating to the ED2000 –VC2010– VRI programme in the Agder region are illustrative of such mechanisms. In 1995, researchers from Agderforskning, in close collaboration with Agder University College, established the ED2000 programme. This was a huge undertaking for both the researchers and the regional stakeholders

who participated in the regional development coalition. Both the researchers and the regional stakeholders lacked experience with this type of collaboration (Levin, 2002). Interestingly, several of the key stakeholders involved in this early phase were still active in similar roles in the regional development coalition two decades later. With support from collaborating institutions with more experience in running action research-based projects, such as AFI (Work Research Institute) and NTNU (Norwegian University of Science and Technology), the Agder group was able to overcome the initial challenges and successfully enter the successive programme, VC2010. Here, the complexity of the development increased and the programme ended as the result of a conflict between researchers and the regional stakeholder group (Johnsen and Normann, 2004). However, the region was yet again able to mobilise resources and rally behind one regional application for the new VRI programme. The stakes were once more raised as new partners, topics and research agendas were added to the mix. After a relatively short time there was a realisation both at the regional and national levels that the programme had become too complex to manage. In the last two periods, the programme was split into two and later into three separate programmes, with the aim to reduce complexity.

The strategic choice of reducing programme complexity made it manageable for the regional development coalition to work towards realising the programme goals in a systematic fashion. Now both had the benefit of being experienced with the practicalities of this way of working, necessary social capital was developed and the roles and responsibilities between different parties were both understood and uncontested. When «roles and goals» became clearly defined, it made the collaboration between academic institutions, regional government and regional firms more manageable. This is not to say that there were no problems or challenges, but it was now possible to address and solve them.

## 6. CONCLUSION

Regional leadership has emerged as a powerful prism through which to approach the complexity associated with regional coalition building aimed at fostering local economic development. In this paper, we provided a historical analysis of the evolution of programmes supporting regional innovation in Norway's Agder region. Our data show that partner and case complexity are intertwined and therefore should be taken into careful consideration when devising new regional development (including but not limited to regional coalition building) initiatives. The Agder case also points to the importance of what the emerging literature on regional leadership refer to «generative leadership relay» (Sotarauta, 2015) centred on strategic awareness and collective belief formation through the continuous assessment and interpretation of global (macro level) and local (micro level) events; making sense of them, and acting appropriately with the aim of re-defining existing institutional arrangements (Benneworth *et al.*, 2017). Further, it reinforces the notion that leadership is a shared effort over long peri-

ods of time and that it is embedded in both informal and softer dimensions that move beyond tangible factors such as (formalised) power, strategy and financial resources (Sotarauta, 2014c; Sotarauta *et al.*, 2012a).

The key learning from the Agder case is that collaboration in itself must be learned and experienced, and that the inherent complexity of collaboration in a regional development coalition should not be underestimated. In the Agder region, regional stakeholders spent close to two decades before they found a collaborative model that was relatively uncontested and that was capable of delivering on the expectations jointly set by the involved stakeholders. The Agder region has in this sense benefited from being a relatively small region and having a relatively stable (degree of continuity) regional stakeholder group. Another takeaway from this case is that the ability to plan, control for, and adjust partner and case complexity in the light of regional needs and resources/abilities can both be viewed as an important role for regional leadership and as an indication of its presence. The challenge of course is to operationalise what complexity means in different contexts. We believe that such operationalisations are possible to identify through a combination of an evaluation of past collaborative experiences with an assessment of future demands and available resources.

Future studies across Europe could also shed further light on how regional coalitions first emerge and develop as well as on how regional actors, formal and informal leaders included, handle the various tensions and complexities that such endeavours entail. Moreover, we urge researchers to investigate how external events such as the recent financial crisis affect the dynamics of regional coalitions composed of partners from a multiplicity of economic sectors, themselves facing numerous short- and long-term challenges. Given the complexity of the phenomenon at hand, we recommend adopting longitudinal and mixed-methods research designs, preferably covering multiple cases.

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