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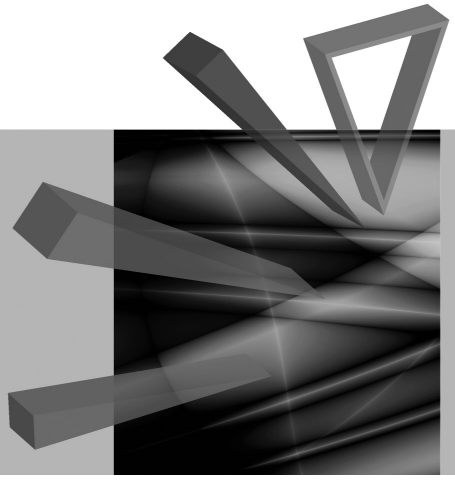

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THE CLUSTER OF CLUSTERS CONCEPT IN THE PERSPECTIVE OF REGIONAL POLICY-MAKING AND BUSINESS PRACTICE

Abstract: Even though the world has become truly global and biased for innovation, proximity still plays vital role in business processes and the achievement of competitive advantage. Therefore, various notions in regional studies approach the issue of territorially anchored growth and innovation to start with agglomeration economies, territorial productive systems, milieus or clusters. This paper conceptualizes a phenomenon of Cluster of Clusters (CoC). The objective of the paper is to explore possible theoretical aspects of CoCs and introduce the CoCs facilitation methods to create synergies among neighbouring clusters and clustering initiatives. RTD cross-border cooperation among partners from the Czech Republic, Poland and Slovakia was used as a test bed under the FP7 scheme – some retrospectives on CERADA project linking Polish, Czech and Slovak regions are provided in the paper.

Keywords: clusters, Cluster of Clusters, cross-border cooperation, Central Europe, R&D capacity.

1. Introduction

It is a bit of a slogan and a load of reality that nowadays we live in so called New Economy. Lately, we have experienced a rapid change of paradigms. No longer the traditional approach to factors of production (What do we have? Land, labour, capital) nor location theories of the 19th and early 20th centuries explain patterns of economic development. Also the hype over human capital (Whom do we have?) already dimmed. A widely believed and appreciated notion sees these years as an era of going back to the pre-industrial relations of "Whom do we know?" true in both territorial and global contexts. Especially the socio-economic interest in social capital – studied by P. Bourdieu [2005], J. Coleman [1994], R. Putnam [1995], F. Fukuyama [1997] and their followers – strengthened this approach. The New Economy utilises territorially embedded networks and their global relations to

achieve international advantage based not on comparative costs but on excellence, innovativeness and hence being lean and effective enough to compete in terms of added value. This paradigm shift is also widely known as a conversion into Knowledge Economy.

The networking approach implicates various "constellations" of players who achieve their business or policy objectives in an atmosphere of cooperative competition ("co-opetition") drawn from the Nobel Prize awarded works of J.F. Nash. These constellations emerge mostly as purely business-based organizations and alliances but also as business–academia relations and (in the territorial policy perspective) turn into praxis described by the concepts of triple helix model [Etzkowitz 2003] or regional innovation systems [Braczyk et al. 1998]. The pinpointed different patterns of collaboration may all be shortly described as multi-actor partnerships.[1] The concept of multi-actor partnerships has been scrutinized by our research team within the pan-European consortium in 9 countries. For more details please refer to [Barczyk, Ochojski 2007].Based on the concept of enabling stakeholder management introduced by J. Calton and N. Kurland [1996] and following the debate on stakeholders' critical role in organisations – primarily given to works by R.E. Freeman [1984] – the strategic importance of various actors applies to the complex world of business and non-business relations. The post-modern approach to stakeholders is basically based on the interplay of actors rather than pure models of managing the stakeholders. In praxis, entering in and acting within the multi-actor partnerships needs new skills and tools related to stakeholder analysis. Both individually and collectively the actors identify their stakes and assess risks. As contributed by R.K. Mitchell et al. [1997] the models offering dynamic analysis of stakeholders give best explanatory value. Also, the territorial policy approach should not be left aside as an extra dimension, e.g. regional growth, and should be incorporated in such models of analyses. Further contribution is therefore offered by means of adapted stakeholders' analysis model in territorial networking and clustering context.

These dilemmas have been further conceptualized into the phenomenon observed by the authors and proposed to be called Cluster of Clusters (CoC). The objective of the paper is to explore possible theoretical aspects of CoCs and introduce the CoCs facilitation methods to create synergies among neighbouring clusters and clustering initiatives. RTD cross-border cooperation among partners from the Czech Republic, Poland and Slovakia was used as a test bed.

[1] The concept of multi-actor partnerships has been scrutinized by our research team within the pan-European consortium in 9 countries. For more details please refer to [Barczyk, Ochojski 2007].

2. From industrial agglomerations to cluster of clusters

The traditional understanding of economic term agglomerations dates back to A. Marshall and his works [1890, 1919]. It has been widely studied in literature focusing on territorial and firms' innovations [Cooke, Morgan 2000; Kourtit et al. 2011; Simmie (Ed.) 2001] but it should be noticed that Marshall's concept did not address innovation but focused on industrial atmosphere. Nevertheless, it is the 90s of the 19th century when traditional agglomeration theory was developed allowing new perspective and further conceptual works on how territories and their economies growth. Internal economies of scale are at the heart of the processes explaining concentrated and limited in space locations of production. In other words, A. Marshall assumed that external economies pooled in particular place should be critical to firms' growth and territorial specialisation. The greater the pooling of common factors of production such as land, labour, capital and infrastructure, the greater the achieved effects of specialisation. In turn, competitiveness and productivity of firms becomes significantly enriched. Agglomerations are territories of organised business and non-business units who make use of benefits provided by geographical proximity of various production factors and who contribute to the development of the territory.

The works on economic space by F. Perroux [1950] change the modern understanding of the linkage of territorial growth and firms. F. Perroux provides arguments that innovative activity leads to agglomeration. Firms and industries with innovative potential are the key factor influencing the growth of territories. The agglomerations affect less developed sectors and areas with the linkages of varied nature – both backwards and forward. The multiplication of linkages as well as price effects should diffuse over the territories where the industries are located and affect other territories. E. Hoover [1948] in his early works on agglomeration theory (1930s and 1940s) describes three sources of advantages in agglomerations. Namely, these combine localisation economies, internal returns to scale and urbanisation economies. The specialisation is a result of the law of large numbers and the size of agglomeration. Nevertheless, it is multiple opportunities for new combinations of inputs (leading to innovation) that should be seen as business comparative advantage factor in large agglomerations (metropolitan regions, as studied by E. Hoover preferably move the interest to urban economies).

The classical or rather neo-classical concepts explaining territorial growth and agglomeration economies turns in 1970s in a new phase to be influenced not only by global depression and economic shocks but also a growing interest in so called new industrial districts. The works of M. Piore and Ch. Sabel [1984], G. Becattini [2003], S. Brusco [1986, 1992], F. Belussi et al. [2003], Ph. Aydalot [(Ed.) 1986], R. Camagni [2002], J.-C. Perrin [1988], and D. Maillat [1995, 1996] spun considerable debate over economic change in territories. Growing heterogeneity

and uncertainty formed pressure over markets and put forward customers' specialised demand "out-dating" the traditional mass production systems. Flexibility in production and permanent innovation turns space into more clustered areas with high expectations put on craft and vertical disintegration of industry, which promotes spatial agglomeration. It is the specialized producers who achieve returns to scale due to proximity and cost reduction. In other words, external division of labour is the key pattern observed here. The flexibility of production and specialisation looks back to the explanation of networked firms. Innovation is territorialized by means of concentration of small locally networked firms (where Third Italy textiles, ceramic tiles and footwear industries are widely investigated and cited as best practice) and connected to large firms. The effects thus can be diffused throughout the wider territory ready smoothly to adapt to change. The industrial districts phenomenon as studied in Italy and sometimes linked to California [Scott 1993] is given further works with the GREMI network, which investigate innovative milieu concept. The milieu should be seen as a driving force of territory and it is understood as a grouping of actors, processes and interactions leading to territorially embedded synergy of production. Here, the territorial growth is no longer just a proximity-driven issue but it is provided by means of employees' mobility, learning effects born on the co-operative basis of backwards and forwards production chain (and consumers) as well as face-to-face contacts. The word "collectivity" is a key to translate uncertainty into benefits. The critics of the neo-classical and say, new concepts of territorial agglomerations, argue that the examples studied by particular authors can neither offer general exemplification (cases rather than widely observed models) nor refrain from blurred conceptual factors or tautological explanations. Despite the vast array of arguments one should notice that praxis-based explanations form a good background for theory and it can still be investigated with new factors and new explanations. For instance, the institutional economy represented by O. Williamson [1975] as well as modern evolutionary theory [Nelson, Winter 1982] offer paramount insights over the transaction costs and social mechanism seen as critical factors driving the innovative character of territorial development.

Contrary to the territorial approach to industrial location and clustering, modern world has opened up for new cooperation patterns based on increased information flow and extended transportation capacity on truly global scale. M. Castells' [2008] spirit of informationalism becomes complementary to widely appreciated spirit of capitalism, setting the new organizational paradigm incorporating: enterprise networks; tech-based tools; redefining products, processes, markets and policies; emerging network businesses. In an informationalism era neither single entities or individuals nor corporations, classes or states are cornerstones of economy but networks that constantly

adapt to various milieux and markets. According to M. Zack et al. [2009] successful companies focus on four areas of knowledge management, i.e. (1) the ability to locate and share existing knowledge; (2) the ability to experiment and create new knowledge; (3) a culture that encourages knowledge creation and sharing; (4) a regard for the strategic value of knowledge and learning. This kind of attitude leads us to the catchy concept of open innovation (OI) [Chesbrough 2003] that has become truly remarkable in the last years. Based upon research in global companies and their networks, OI is a subject to application within numerous networks across the globe. OI is a very serious offer for those who search for synergies and better cost-income structure in innovation processes. Nevertheless it requires brand new approach to knowledge management, intellectual property rights protection and communicating business strategies. As such business- or policy-driven facilitation of OI networks is not an easy game with a clearly visible "win-win" target. Focus on information needs another focus on trust and vice-versa, trust enables more extensive knowledge spillovers. The models of the late decades of the 20th century were usually based on assumption that proximity strengthens trust [Crevoisier 2004; OECD 2001; Jackman, Miler 1998; Sztompka 2007] but the evidence for that will probably change as years follow and global networks will prove long-term successful not only in terms of cost-based strategies but in terms of trust and relations as well. Almost a kind of apotheosis of this contemporary approach has been exemplified in a concept of the new age of innovation [Prahalad, Krishnan 2008]. Business models based on accessing global resources and talents, focused on satisfying personalized experiences strongly undermine our understanding and interest in advantages that we have usually perceived as agglomeration economies.

The state-of-the-art concepts related to clustering as well as to territory and its role in business processes are therefore somewhere "half way" – on the one hand still being an attractive concept for local and regional policies; but on the other, calling for: strategic alliances in larger scale, diminishing risk internationally or globally, complexity and flexibility on different markets; new roles in turbulent global environment [Palmen, Baron 2011]. Another important aspect of clustering that should not be left aside is innovative activity influenced by specialisation of production activity in neighbouring regions and their clusters. R. Moreno et al. [2005] discuss the relevance of technological specialisation of neighbouring regions as a driver of innovative clusters. The issue of technological relatedness and consecutively effective technological policies of territories is given investigation in this perspective by R. Boschma [2011].

As a consequence the territory being subject to clustering policies is "growing" compared to our perception dated back to the turn of centuries. For this reason we

find a concept of "cluster of clusters" an interesting idea that allows the synergy of improved market mechanism, extended agglomeration economies and better policy coordination. Cluster of clusters is understood as a focused approach towards creating synergies among neighbouring clusters and clustering initiatives. CoC is a facilitating mechanism that encompasses:

– multi-regional, but still not dispersed territorial location of activities,
– multi-industry approach with extended utilisation of horizontal technologies and infrastructures,
– multi-actor perspective in business activity and public administration (policy making),

with clear strategic focus on becoming competence pole in selected bunch of products originating from unique technological portfolio. The tested CoC concept may be considered parallel to M. Delgado et al. [2011] works on importance of cluster-based agglomeration in regional economic performance. Especially the common point of interest is on empirical verification whether processes taking place in one cluster may affect related and neighbouring clusters. Anyway, while M. Delgado et al. focus on statistical evidence, the case presented in this paper emerges from foresight and strategic studies.

3. Methodology

Stimulating a CoC has been a subject of tests in four neighbouring regions of Poland, the Czech Republic and Slovakia.[2] The CoC concept is understood as a joint institutional space and the related growth of R&D interactions in the cross-border dimension. The clustering industries of the above-mentioned regions of Central Europe have similar historical background referring to traditional and heavy industries. The business agglomerations of the regions "grew up" in a synergy with a territorially deep-rooted R&D sector. Moreover, the sectors and the territories follow the path of restructuring into a more knowledge-based economy. The "space" we refer to is understood as the Central European Research and Development Area (CERADA), a mix of interlinks between territory, people/organisations and opportunities emerging from joint activities and common goals. In 2008 and 2009 pilot activities targeting the cluster of clusters in material processing, automotive and aviation sectors were held by scientific, business, policy and other actors. Starting from 2009, the CERADA continued the cooperation under the 7th Framework Programme. A direct result of the clustering of the clusters is a Joint Action

[2] The neighbouring regions are: Moravskoslezský kraj (the Czech Republic), Województwo Śląskie (Poland), Zlínský kraj (the Czech Republic) and Žilinský kraj (Slovakia).

Plan (JAP).[3] Indirectly, the critical mass reached thanks to the CERADA have mobilised at least two cross-fertilising networks across the area: TRITIA and PROGRES3.[4] The theory and praxis of strategic planning offer a vast array of constructive management practices and tools [Ansoff 1965; Freeman 1984; Ambrosini et al. 1998; Porter 1990]. It is widely tested and implemented in business and public sector; as territorial development adds up to the field by means of public-driven strategies and public sector management [Stimson et al., 2006; Johnson, Scholes (Eds.) 2001; Osborne, Gaebler 1992; Flynn 2007]. Innovations and new technologies provide new opportunities and constitute new setting for implementing strategies [Martin 2003; Laranja 2004; Asheim, Isaksen 1997]. Also, the growing interest of foresight studies [Godet 1987] and action learning [Argyris, Schoen 1974; Pedler 1996; Raelin 2000; Revans 1980, 1982] extend the portfolio of innovative management toolkit [Franz, Sarcina 2009].

A detailed mechanism of the CoC stimulation and growth has been set up for the purpose of CERADA (Figure 1). Based on the strategic thinking, the axiological framework best applies to managing changes in complex organisations. Territories – namely, neighbouring regions, with a common history of business agglomerations can be targeted as hypothetical networking area. The wide panorama of stakeholders should be a subject of a contextual analysis leading to identification of key interested parties representing public, private and civic sectors and offering business, academic and political networks. Thus, the processes leading to CoC stimulation and development must be agreed by means of various dialogic opportunities and tools that may include such prerequisites as networking events, natural interregional networks, business to business links, scientific and R&D projects, political commitments as well as personal contacts. The stakeholders' analysis is seen as a dynamic tool offering a unique opportunity to identify actors' roles and rules of action. It stabilises the territorial perception of milieu with a clear "entrance point" to develop common CoC vision and mission. Once the "axiology" is agreed, the diagnostic part applies offering strategic and prospective nature of studies. It is then followed by a set of normative recommendations. Consequently, the action plan (namely, JAP that states for Joint Action Plan) is an offer of detailed roadmap of activities. More importantly, it is a significant test of CoC's growth maturity.

[3] The authors of this paper provided methodological guidance to the CERADA stimulation and development. Methodologies, working materials and results of CERADA presented here have been originally published in an extended version in [Baron, Ochojski 2011].

[4] TRITIA – European Grouping of Territorial Cooperation – alliance of regional authorities, PROGRES3 – alliance of universities.

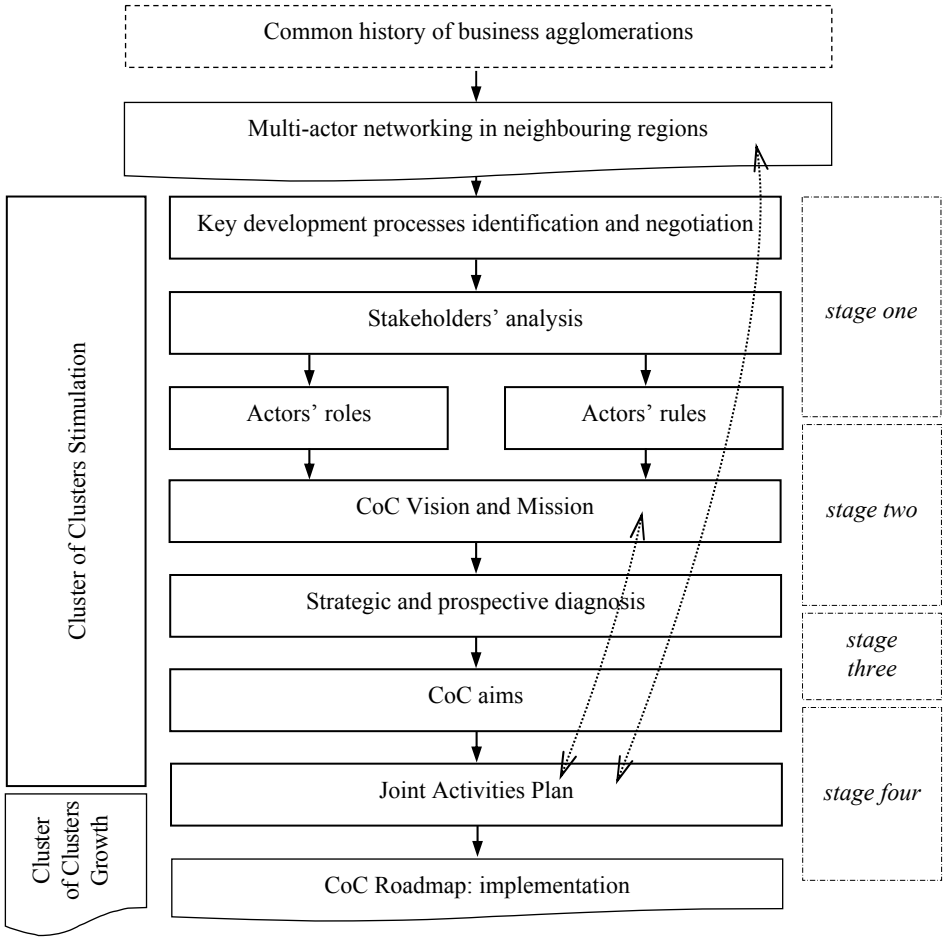

Figure 1. Cluster of clusters stimulation and development mechanism – CERADA model

Source: own elaboration.

Apart from the classical strategic management structure, the model focuses on a double learning loop that stabilises joint efforts in a rapidly changing environment. Firstly, it is used as an learning and networking interaction between the strategic context and the action plan. Secondly, it appears as the validation and a cross-fertilisation of the strategic context for further development during the JAP implementation and further on. The second loop offers a testing CoC against the resilience of the normative result of managing the CoC in terms of new projects, partnerships and new clusters in the neighbouring regions. The four stages presented in Figure 1 have been programmed to develop CERADA as a CoC.

4. Study

4.1. The case of CoC: Stage one

The preliminary stage targeted a customized version of stakeholders' analysis applied to initially recognized CoC development processes. The identification of particular actors' interests and patterns of interplay requires the application of professional tools of institutional and economic analysis. The stakeholders' analysis applied here utilises two dimensions, i.e. "influence and attitude." The influence dimension refers to the actor's capability of playing a significant (insignificant) role in supporting a given process, whereas attitude describes real engagement towards certain aspects of CERADA. The roles of actors vary respectively of the scrutinized process (Figure 2). "Mobilisers" are those actors whose interest and attitude towards the aspects of CERADA are relatively highest. "Leave-alones" would rather stay apart from the processes while having a fairly strong impact on them. "Supporters" are actors with little impact but still fairly high interest in the CERADA activities, whereas "Audience" has neither the ability to impact the process nor the interest in the CERADA issues. Finally, "Advisors" are those whose interest and ability to impact CERADA are moderate. "Mobilisers" are understood as key actors regarding the initiatives within the process. "Advisors" have the biggest potential to become complementary partners, whereas "Leave alones" may or may not contribute to the "Mobilisers" efforts because of a possible conflict of interests. Supportive role of "Supporters" is meaningful in building up the critical mass in the CERADA processes.

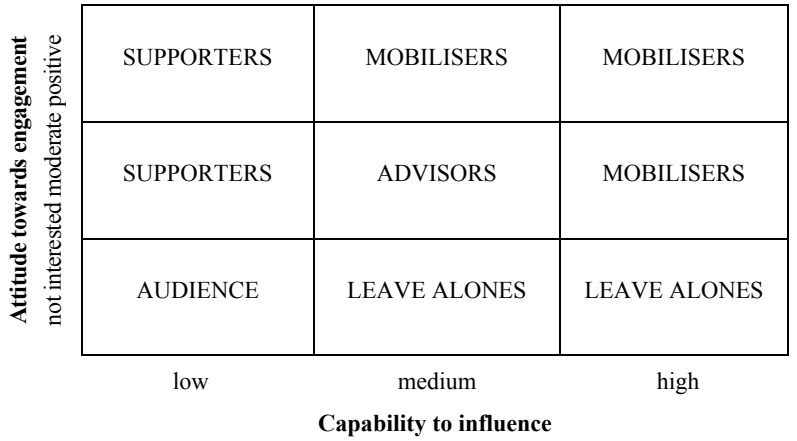

Figure 2. Cluster of clusters stimulation: stakeholders' analysis matrix – CERADA model

Source: own elaboration.

Facts	Hypothesis	Recommendations
Many entities in automotive, aviation and material technologies present in CERADA.	Cooperative patterns of business sector hardly established across CERADA; while R&D and regional development institutions present a sound track of records in this field.	Automotive, aviation and material technologies entities present in CERADA shall serve as "learning labs" for further activities in CERADA.
Little knowledge on state of the art concerning the merits of b2b/b2r&d cooperation in CERADA.	No standardized approach to cataloguing data; case studies developed occasionally within projects, focused information owned by research teams or businesses with limited dissemination.	Strengthening the CERADA database shall be done with special attention not only to the partner information (yellow pages), but mainly to the relations, joint projects and best practices of cooperation across CERADA as well as external parties.
Big potential of HEIs and R&D Institutes offering research, testing and certification services.	–	CERADA can take the form of a two-step activity: 1) standardisation and cataloguing of offers and 2) creating joint offers to CERADA and non-CERADA business.
Different financing patterns of R&D in CERADA	Difficulty in arranging for new R&D projects originates from the complex financial engineering including governmental, EU and private funding.	Building upon the know-how of the best existing and emerging practices, the CERADA platform should become in the long term a vehicle for negotiating transnational financing patterns.
Large multinational companies refrain from participation in collective territorial processes due to corporate policies.	–	CERADA should underpin territorially localized global brands in order to attract first and second tier suppliers to joint activities.
Several clustering initiatives in CERADA not linked one to another, even though targeting similar issues.	Stakes of every single region, their FDI policies and financial resources allocated to administrative regions limit the scope of sectoral co-operation in the interregional dimension.	CERADA together with the EGTC initiative should boost common policy visioning of the area and support its implementation by means of CERADA value-adding clustering initiatives.
Formal political partnership agreement between Śląskie, Moravskoslezský kraj and Žilinský kraj.	Even though regional authorities have a legal base for common economic initiatives, till now no common widely recognized "label"/"attractor"/"brand"/"star"/"product" has been pursued or created and disseminated.	
EGTC plans of Śląskie, Moravskoslezský kraj, Žilinský kraj and Opolskie (PL).	–	
Many similar initiatives bridging R&D and business in the regional dimension of every CERADA region.	Programming of EU funding for 04-06 and 07-13 focused more on the quantity of projects; that dispersion resulted in overlapping activities and outputs (e.g. databases, action plans, best practice catalogues).	CERADA must become a "natural" cooperation space, where more partners of various nature and origin negotiate and reach consensus upon joint projects thus influencing political decisions to allocate funding to bigger projects. In other words, CERADA becomes an "opinion--maker" for interregional activities.

Figure 3. Key diagnostic statements concerning CERADA

Source: own elaboration.

Interregional task forces in CERADA allowed to recognise basic assumptions of further collaborative processes. The agreed five processes are composed of:
– competence development in CERADA,
– strategic orientation of CERADA,
– multi-actor partnership in CERADA,
– regional learning in CERADA,
– knowledge-sharing by CERADA.

As a consequence an institutional panorama of actors, their roles and rules, was diagnosed according to the five processes and utilised for further stages. For details of the model application see works by M. Baron and A. Ochojski [2011].

4.2. The case of CoC: Stage two

The key objective of this stage was to agree upon the vision and mission as well as to recognise the common approach to the creation of the JAP. The activities performed made it possible to investigate the nature of cooperation across CERADA. Furthermore, a set of descriptive analytical statements: facts, hypotheses, perspectives, based upon numerous diagnostic studies (Figure 3), was agreed. Afterwards, the final version of CERADA's vision and mission has been worked out (Figures 4 and 5). The CERADA vision has been elaborated as a general philosophy of CoC. It has resulted from the consensus between numerous partners attracted by the CERADA concept. The main message behind the vision is to make use of the potentials of the participating regions and to utilise opportunities that emerge in Central Europe in order to create an industry-based pole of excellence. The vision has been operationalised in the form of the CERADA mission. The mission reflects a pursuit of institutional measures that would enable a successful CoC growth.

CERADA is a multidimensional and multi-actor R&D support platform for suppliers in the production chain and value chain of automotive and aviation industries. Offering shared R&D capacities, the regions of Central and Eastern Europe benefit from knowledge economy to support anchorage of these industries and their technological leadership.

Thanks to the excellence developed in automotive and aviation industries, as well as building upon the tradition of steel, metal, plastic and rubber production, CERADA becomes the European R&D competitiveness pole in material engineering.

Figure 4. CERADA 2020 – the vision

Source: own elaboration.

In order to achieve the vision of CERADA 2020 the partnering regions will pursuit collaborative, public and private: programmes towards business orientation in R&D sector, approach to incubation and growth of a portfolio of complementary business networks support to soft-skills development and learning for modern technological processes.

Figure 5. CERADA – the mission

Source: own elaboration.

4.3. The case of CoC: Stage three

In stage three business, R&D and technology transfer intermediaries as well as individual clusters from the participating regions and public institutions have continued with their feedback on the CERADA arrangements. In particular, CERADA's initial characteristics have been reassessed by providing a confirmation of the CERADA strengths and weaknesses. The statements concerning external factors have been tested against the business perspective. The reassessed threats and opportunities together with the internal factors comprised the key SWOT factors for CERADA. Upon that aims of the CERADA CoC have been decided (Figure 6).

- Understanding CERADA: recognition of trends and potentials in key sectors and their environment.
- Positioning CERADA: placement of CERADA in national and international policies and business strategies.
- Mobilizing CERADA: participatory patterns of actors' involvement.
- Facilitating CERADA: mutual learning and knowledge spillovers.
- Disseminating CERADA: promotion of CERADA success stories and opportunities to other regions and public and business leaders.

Figure 6. CERADA – aims

Source: own elaboration.

The aims have a bridging role between strategic setting of CERADA as a CoC and its JAP.

4.4. The case of CoC: Stage four

Stage four was focused on brainstorming ideas to be taken into consideration in the CERADA JAP. Various actors have been brought together in regional and interregional cluster environments with the task of projects identification and partnerships building. The participants, using the outputs of previous stages, have been encouraged to propose three types of actions: progressive actions (towards

business and regional dynamics), inclusive actions (towards diminishing disparities), supportive actions (towards enhancing regional knowledge).

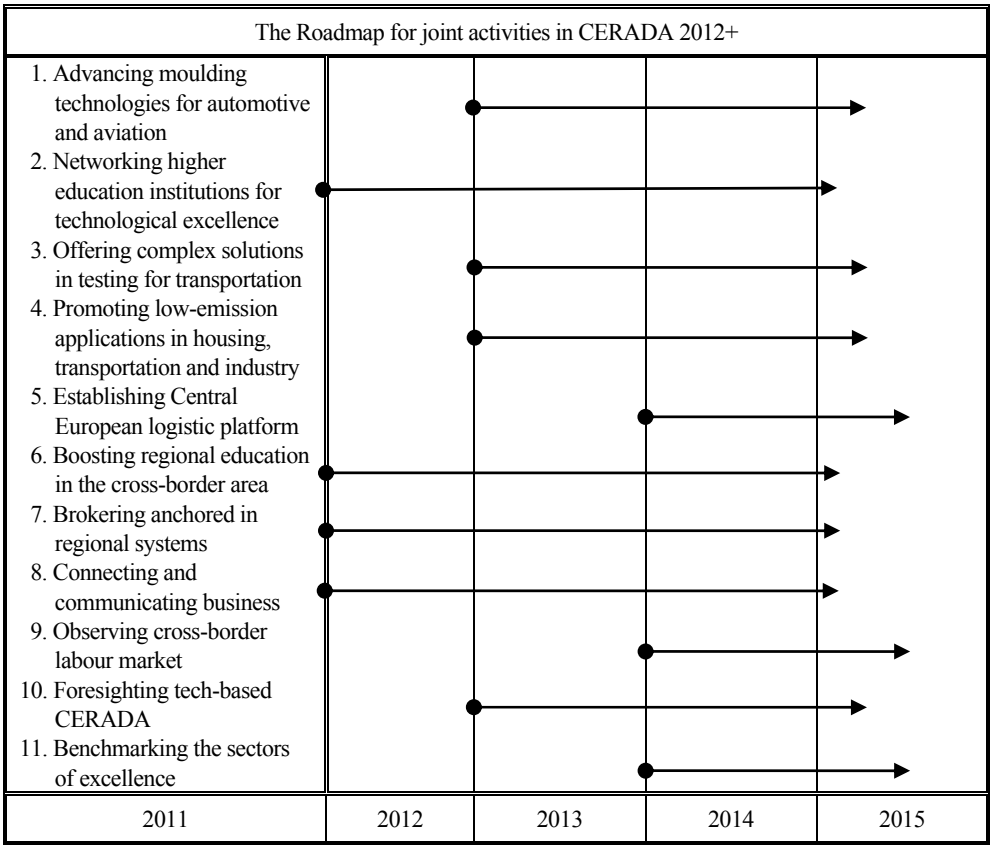

Figure 7. CERADA Joint Action Plan – roadmap 2012–2015

Source: own elaboration.

As a result a portfolio of actions has become the core of CERADA JAP. The actions proposed by the stakeholders have been grouped according to their scope and relevance into: (1) achieving excellence, (2) providing inclusion and (3) offering support to R&D and business development. Moreover, they have been coupled with the CERADA aims, i.e.: understanding, positioning, mobilizing, facilitating and disseminating CERADA. Afterwards, a fiche was drafted for every action. An overview of the proposed actions leads to drafting the CERADA Roadmap for 2012+ (Figure 7). Again for details in practice see works by M. Baron and A. Ochojski [2011].

5. Conclusions and recommendations to CoC facilitation

Based upon strategic management and regional science assumptions, creation and stimulation of the CERADA as a CoC were practiced in an approximately 130 km radius cross-border territory of fairly strong geographical, cultural and industrial coherence. Nevertheless this proximity and coherence have been heavily burdened by strong economic competition among the participating regions (especially in terms of attracting FDIs as well as stabilising internal labour market) and usually divergent national policies that do not focus on utilising common patterns in cross-border regions of Poland, the Czech Republic and Slovakia.

The overall CERADA initiative was rather a bottom-up than top-down policy based, approach that proved feasible in terms of its implementation but – at least for the incubation period of 2–3 years – not successful enough in widening partnerships and business-based projects. A kind of paradox is that while business representatives called for efficiency, productivity, nurturing innovation patterns and resilience capacity, their involvement was limited to submitting ideas; not dynamically getting into programming nor project pipeline. Moreover, the initiatives pinpointed in the JAP or further supported by CERADA (like the alliance of regional authorities or the alliance of universities) are still of quite framework nature. In other words the applied CoC concept has remained still more an institutional arena of regional development than a springboard for innovative business projects.

The stakeholders' interplay has been key to the CERADA stimulation and maturing. The ability to adopt learning loops between various layers of strategic planning with the use of stakeholders' perspective is crucial or even *sine qua non* condition in the facilitation of CoC. Applying stakeholders' interplay and strategic planning is much more challenging than in individual clusters or clustering initiatives. It is due to growing heterogeneity of the involved multi-actor partnerships. An example of the CERADA – where industrial neighbourhood effects are intensively diminished by dividing effects of state borders, national laws and e.g. languages – shows that it is even a bigger challenge, while CoC concept is imposed on cross-border area. Facilitation must therefore encompass different business cultures, individual strategies not only of single institutions but of regional and national networks as well, communication issues related to cooperation in transnational dimension, etc. The role of CoC facilitators is rather different and specific. New skills are needed and new patterns of consensus and negotiations must be exercised.

The CoC model, be it case-specific or a new agglomeration pattern, confirms that the territorial proximity is necessary, hence not sufficient clustering stimulation and development factor. The sound networking history of science and business environment in neighbouring regions (territories) seems to be critical to

form the bottom-up approach to CoC stimulation and may allow further institutional strengthening. The political goodwill is not sufficient to boost the process (or add up as a top-down initiative) unless supported by joint formal agreements (the case of TRITIA). However, the political support, even if not formalised, may trigger opportunities to science and provoke reactions of business environment and finally boost the networking potential.

Even though there is no wide evidence to prove the hypothesis that CoCs can be a new step in theory and praxis development concerning localisation and agglomeration of firms in territories, one should recognise the concept as a direction to formulate new investigation and follow-up research. It is to be understood that due to enormous fragmentation of similar activities performed to boost enterprising and innovativeness in neighbouring territories (by policy, R&D and academia), CoCs might become the natural rescue. The CoC approach relies upon creating an atmosphere of a melting-pot interregionally and intraregionally and thus it is the arena of multi-actor partnerships where people meet and interact on the basis of multi- and bilateral contacts of various nature: business, societal, motivational, scientific, and other. At the times of information asymmetry, uncertainty born by global and regional depression and the common calling for resilience, "single clusters" may be a safety guarantee neither for the business nor for the growth of territories.

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KONCEPCJA KLASTRA KLASTRÓW W PERSPEKTYWIE POLITYKI REGIONALNEJ I BIZNESU

Streszczenie: Choć żyjemy w erze gospodarki globalnej i silnie nastawionej na rozwiązania innowacyjne, bliskość geograficzna wciąż odgrywa ważną rolę w procesach biznesowych oraz osiąganiu przewagi konkurencyjnej. Z tego powodu liczne prace prowadzone w nurcie badań regionalnych dotyczą zagadnień terytorialnie zakorzenionych wzrostu i innowacyjno-

ści. Wśród nich można wymienić kwestie korzyści aglomeracyjnych, terytorialnych systemów produkcyjnych, środowisk czy klastrów. W niniejszym artykule zdefiniowano zjawisko klastra klastrów. Celami artykułu są zgłębienie możliwych aspektów teoretycznych klastra klastrów i przedstawienie metod animowania jego rozwoju sprzyjającego kreowaniu synergii sąsiadujących ze sobą terytorialnie klastrów i inicjatyw klastrowych. Za podstawę badań posłużyła współpraca w dziedzinie badawczo-rozwojowo-wdrożeniowej partnerów z pogranicza czesko-polsko-słowackiego realizowana w ramach 7. Programu Ramowego UE. Artykuł zawiera odniesienia do projektu CERADA łączącego regiony Polski, Czech i Słowacji.

Słowa kluczowe: klastry, klaster klastrów, współpraca transgraniczna, Europa Środkowa, potencjał B + R.