

## Intellectual Capital and Region as a Knowledge Cluster

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### Abstract

Paper briefly summarizes purpose and some conceptual and theoretical assumptions of the research in progress, focused on intellectual capital (IC) within two regions in the Czech Republic (Zlín and Moravia-Silesia), where several „traditional“ clusters were newly established.

**Key words:** intellectual capital, intangibles, knowledge cluster, region.

### 1 Introduction

For the success in the knowledge economy, clusters and regions need to have a certain level of appropriate measurement and reporting (e.g. cluster/regional „scoreboard“). It should include relevant measures of intangible assets / intellectual capital. Otherwise much of both policy and entrepreneurial effort should be potentially wasted or lost. Thus here is an extent to think about regions as „knowledge clusters“.

### 2 Suggested research – purpose and goals

There are many reasons to conduct research(es) on presented concept:

1. Marr [1] calls for interdisciplinary research and more collaboration between academia and practice. According to the my view, concept of regional clusters (even with knowledge dimension) is very suitable “model“ for such interdisciplinary collaboration. It should covers the whole triad (Triple Helix) and representing stakeholders here and also such research needs to interlink and consider different “disciplines” - economic geography, regional development, knowledge management, strategy, innovation etc.
2. Bounfour and Edvinsson [2] suggest „communities“ agenda and call for example for assessing organizational forms under different socio-economic regimes and defining instruments for managing IC of regions.
3. Marr, Gray and Neely [3] identified five drivers for IC research agenda within IC field”
  - strategy formulation,
  - strategic assessment and execution,
  - strategic development, diversification and expansion,
  - compensation,
  - communication to external stakeholders.

Bonfour and Ståhle [4] add that “strategic issues must be highlighted” in current IC research.

4. Andriessen [5] calls for reconciling the rigor-relevance dilemma of IC research, suggesting Van Aaken’s [6], [7] concept of design science as a potential methodology to bridge the gap. Bonfour and Ståhle [4] also highlight “IC research should be upgraded from the current metaphorical stage to become a more concrete tool for...competitiveness and foresight”. Also Andriessen [8] notes the metaphorical aspects of IC.
5. Most recently there are a results (and suggestions) from RICARDIS [9] project and final conference (Berlin, 15 November 2007) on RICARDA project, a project funded under the EU 6<sup>th</sup> Framework Programme which concerns on IC reporting in clusters. For details and downloads you can visit [www.ricarda-project.org](http://www.ricarda-project.org).
6. My aim personally is also to introduce the Czech Republic as a new „case“ country on IC world’s map.

With the respect of above mentioned concept, author’s consulting professional background and experiences (e.g. as cluster facilitator) and discussion with people from IC community (McMaster Congress 2007 in Hamilton, IC Congress 2007 in Haarlem, IFKAD 2007 in Matera), the purpose of the research is

- To motivate and mobilize to the real and contextual work with intangibles (in the sense of so called “I-stuff”[10] – not only to consider intellectual property (IP)) on the level of companies, clusters and regions.
- To contribute to the debate in the IC community and bring data and insight from the Czech Republic.

Goals of the suggested and ongoing research are as follows:

- To identify/describe (perceived) drivers, obstacles and impact of IC development on companies’, clusters’ and regional level (with the Czech Republic context as rather smaller economy, relatively new member of EU, OECD member, with a lot of foreign investors, currently build mostly on automotive industry).
- To look over the role of strategies/policies for the measurement, management and reporting of intellectual capital (or broadly intangibles)
- To choose or design model for the IC management and reporting on the link “company – cluster(s) – region” (with the Czech Republic context).
- To design a model for the region to act as a knowledge cluster.

There is also a close link and synergy with the project “Cluster performance measurement”, which is lead by Center of Applied Economic Research (CAER) at Tomas Bata University in Zlin, where the author is member of the research team.

Some kind of synergy is possible to find also with the research of Anssi Smedlund from IMI Helsinki University of Technology (author met him on McMaster Congress, Hamilton in January 2007) and Marcin Kozak from University of Czenstochowa (Poland, author met him on IC Congress, Haarlem in May 2007).

### **3 Some theoretical foundation**

Concerning the research topic and inspiration for its, I have already mention recommendations from the literature. I see the topic as an emerging, which combines theoretical background and reality/praxis from several field, mentioned above as keywords:

- Intellectual capital (intangibles) and its management, measurement and reporting
- Regional development for competitiveness with topics stressed by EU - innovation, R&D, knowledge economy, Triple Helix etc.
- Concept of clusters

### **Intellectual capital – management, measurement, reporting**

In its 10 years “modern” history IC community established sound base of the theory. For the authors it is a opportunity to edit main thoughts, that seems to be differentiated concerning reporting and measurement methodology (e.g. [5]). Patrick Sullivan presented on IC Congress 2007 analysis of more than 85 approaches to measurement. Complexity of the IC theme we can see from many different perspectives suggested e.g. by Marr [1]. Practical examples provide for example Roos, Pike and Fernström [11]. EU already also had activated a study RICARDIS [9] to create picture of current development on IC field. From the measurement and reporting point of view, obviously inspiring are cases of Skandia [12], MERITUM, NORDIC projects and so called “Danish Guidelines”. They are for example summarized in RICARDIS [9] report.

### **Regional development**

I described brief summary of link between regional development (in the direction of the work of Bachtler and Yuill [13]) and knowledge clusters on the international conference Searching for the New Europe [14]. It is in accordance with current stream of thoughts (e.g. Skokan [15], Budd, Hirmis, [16], Uotila, Melkas, Harmaakorpi [17]) in regional development.

From the economics point of view data on cluster and regional level creates “meso-economics”. It doesn’t mean an effort to seek for “meso-economics” as Stuart Holland suggests (Elliot [18], Pereira, [19]). Such “bridge” is based on proposed continuum by Popov [20] „mini-economics – mikro-economics – meso-economics – makro-economics – maxi-economics“. He names firm’s level as „mini-“, regional level as „meso-“ and global level as „maxi-“.

### **Concept of clusters**

Concept of regional clusters was developed and popularised mainly by Porter [21], [22], [23]. In MAP Project 2002, High Level Expert Group of European Commission [24] have suggested (expect traditional clusters) also so called “science\_based clusters”. In the Czech Republic concept of clusters were popularised and supported by governmental agency CzechInvest.

For the author it seems to be logical, that in the knowledge economy, clusters should be based also on knowledge chain. Hubert H. Humphrey Institute of Public Affairs defines knowledge cluster as an innovative, interrelated group of firms that gain competitive advantages through building and transmitting knowledge among local actors. A cluster can revolve around a certain industry that exports beyond the region or involve technologies (e.g. knowledge – note of author) that cross industry boundaries.

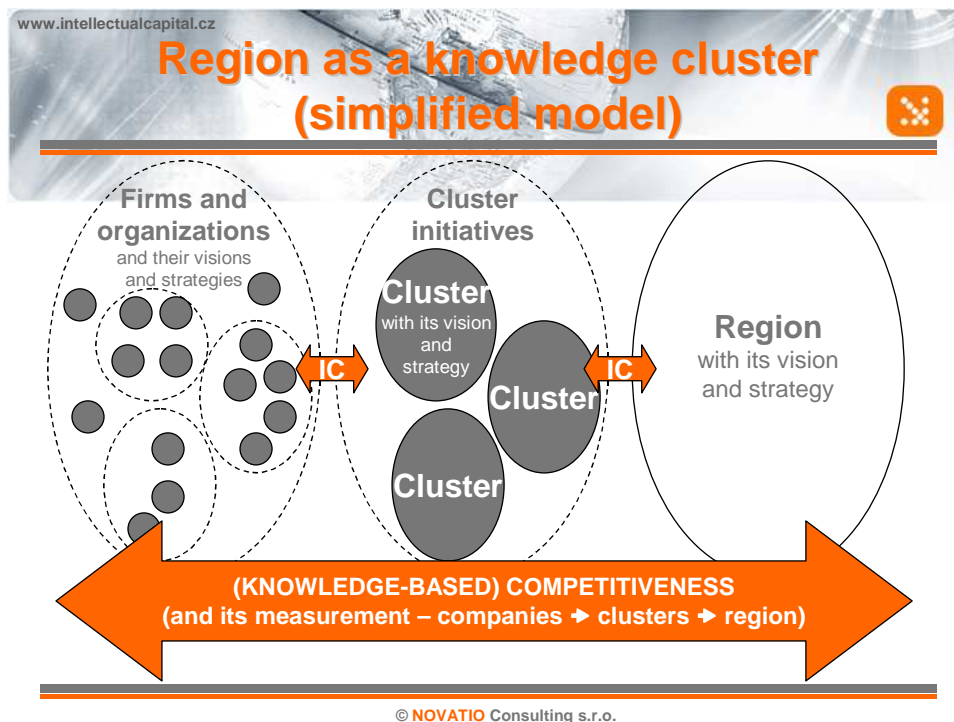


Figure 1. Region as a knowledge cluster - simplified model

Another mentioned example of knowledge cluster is from Spain [25] where knowledge cluster serves other clusters in the region.

#### 4 Research and data

All briefly mentioned sources from literature address for the author a potential for the research. The proposed ongoing research combines explanatory and exploratory approach from the perspectives of ontology and pragmatism.

Methods used for the research are thus very mixed and include questionnaires and interviews, focus groups workshops, using the real case study within previously mentioned regions. From the long-term perspective it is supposed to use action research and the principles of design science (van Aken, 2004, 2005).

Some kind of data for secondary research are able from sources, e.g. IMD (World Competitiveness Yearbook), World Bank (Human Development Index), OECD (OECD Scoreboard), EU (Innovation Scoreboard) etc. On Czech national level than e.g. from Center of Economical Studies ([www.vsem.cz](http://www.vsem.cz), in the Czech language) within University of Economics and Management or Research Center of Czech Republic's Competitiveness ([www.econ.muni.cz/centrum/index.html](http://www.econ.muni.cz/centrum/index.html), in the Czech language).

#### Conclusion

The proposed research in progress is based on the mentioned model (see Figure 1). Its interdisciplinary approach combines IC management and measurement, clusters and regional development as a drivers for innovation and competitiveness of regions. This short summary can not fulfill all literature foundation and useful conceptual frameworks which can contribute to the research. Author presents gradually the concept of "region as a knowledge cluster" on national and international conferences and is going to establish [www.intellectualcapital.cz](http://www.intellectualcapital.cz)

web page, to introduce the topic of IC in the Czech Republic. CERS 2007 conference is an opportunity to discuss the progress and get feedback from the professional community.

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