Development of clusters in Poland

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Agenda

✓ Introduction

✓ Main goal

✓ Research process and methods

✓ Main results of research

✓ Conclusion and Future research
Introduction
Clusters at present
(based on European Cluster Panorama 2016)

✓ 3 000 clusters across Europe account for more than 54 million jobs
✓ there are more than 100 leading clusters (measured by size, specialisation, productivity and dynamism)
✓ strong clusters have shown resilience through the crisis; their share in total traded industry employment and wages has from 2008 to 2014 increased slightly to 45% (jobs) and 51% (wages)
Introduction - In Poland

✓ Polish governments (national and regional) regard clusters as potential drivers of enterprise development and innovation.

✓ Clusters are environments (ecosystems) where enterprises can develop a competitive and global edge.

✓ Clusters in Poland after the boom of initiatives, are moving to the next phase of development based on improvement of their activities.

Now is the moment to verify the number and strength of Polish clusters.

But (as Minister of Innovation said) … In Poland, we will never have Silicon Valley
What is the cluster? The cluster is a CLUSTER:

Cluster = \{C, L, U, S, T, E, R\}

- **C** – common goals, cooperation, co-opetition
- **L** – „links” of potentials, resources
- **U** – units: companies, government, universities
- **S** – specialization
- **T** – trust, social capital
- **E** – effect of synergy
- **R** – relations
What is the cluster? Cluster is the strength

- Cluster as a strength of a region describing aggregations as well as regional and local specialties (Marshall, 1986; Perroux, 1950; Krugman, 1991; Cooke, 2001).

- Cluster as a strength of a sector or inter-sectoral relations forming the competitive edge of companies and business networks (Porter, 1990; Miles et al., 1992; Enright, 1996; Rosenfeld 1997).

- Cluster as a strength of inter-organizational relations based on social capital and trust (Castells et.al., 1994; Chow, 2008; Stachowicz, 2006).

- Cluster as a strength of knowledge, its collection, exchange, creation and diffusion of knowledge network (cluster as a knowledge hub, whose value is achieved with well-configured network resources (Dahl, 2004; Maskell, 2001; Kogut, 2000; Olko, 2016).
Main goal

Main goal:
Assessment of clusters development in Poland.

Specific goals:
✓ analysis of main information (data) on clusters in Poland
✓ clusters specialization vs regional smart specializations
✓ short presentation of strong Polish clusters based on assessment of clusters management
Research process and methods

The studies consisted of three phases:

✓ Phase 1: verification of clusters number in Poland and presentation of the main characteristics: number of clusters, time of their origin, number and diversity of entities in the clusters and and organizational forms of clusters.

✓ Phase 2: characteristics of clusters specialization on the background of regional smart specializations.

✓ Phase 3: assessment of management standards in clusters.

The studies used the basic quantitative analyses and expert assessment, based on action research approach.
Phase 1 - basic characteristics of clusters in Poland

Of the approximately 700 records in database, 214 clusters have been found that meet the basic criteria:

- Cluster has valid, at least one of the documents: confirming the existence of cluster formation;
- Cluster has specified, unambiguous economic specialization;
- Structure of cluster’ members is differentiated;
- Coordinator of the cluster plays an active role in the cluster i.e. provides continuous and periodical services on behalf of the members of the cluster (at least once a quarter);
- Communication and information exchange within cluster is up to date and regular and takes place via: (1) communication platform (e.g. Intranet, newsletter), (2) business and/or integration meetings, (3) or other forms of information flow.
Phase 1 – Number of cluster

Source: own elaboration
Phase 1 - Number of members in clusters

Source: own elaboration

Number of cluster
Phase 1 - The structure of entities in Polish clusters

- Microenterprises: 34%
- Small enterprises: 21%
- Medium-sized enterprises: 12%
- Large enterprises: 5%
- Business environment institutions: 7%
- Scientific units: 7%
- Other entities: 14%

Source: own elaboration
Phase 2 - Cluster specializations

- ICT: 27
- manufacturing: 23
- medicine and pharmacy: 23
- architecture, construction: 22
- power engineering: 21
- tourism: 13
- business services: 13
- food industry: 12
- creative industry: 11
- recycling and environmental protection: 11
- aviation: 6
- transport, logistics: 5
- automotive: 5
- chemical industry: 3
- printing: 3
- shipbuilding and marine industry: 3
- furniture industry: 2
- photonics: 2
- green technologies: 1
- nanotechnologies: 1
- lingerie industry: 1
- sports products: 1
- lifesaving sector: 1
- textile industry: 1
- sports products: 1
- lifesaving sector: 1

Source: own elaboration
Phase 2 – Polish clusters v smart specialization

- The analysis have shown that regions in general have used the clusters potential in the process of smart specialization identification.
- Major part of the regional smart specializations includes clusters.
- In Silesian Province we have three National Key Clusters but only one uses smart specializations.
Phase 3 - Assessment of clusters management standards in Poland

1. Cluster organization: 93
2. Resources: 89
3. Processes: 92
4. Services in aid of cluster members: 89
5. Cooperation with environment: 95

Source: own elaboration based on inventory results

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Conclusions

✔ Phase 1. The number of clusters in Poland is stabilizing, with the simultaneous increase in the number of strong clusters, which results in an increase in the number of National Key Clusters.

✔ Phase 2. The analysis have shown that provinces in general have used the clusters potential in the process of smart specialization identification. Major part of the regional smart specializations includes clusters, including National Key Clusters.

✔ Phase 3. We have strong clusters. An analysis of cluster management standards has shown that clusters in Poland are improving their skills in managing such structures. Some of them is the National Key Cluster.
Future research

✓ Analysis and proposal for verification of strong clusters in Poland

✓ Development and verification model of cluster management using the action research approach.

✓ Observation of changes taking place in Polish clusters.
Thank you for your attention

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