

Analysis of clusters development in Moravian Silesian region as an instrument of increasing SME competitiveness

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Abstract

In today globalize world, where to entrepreneurship rules hyper competitiveness and international chains of world brands plays main role, is very hard for small and medium entrepreneurs to face up and to be successful in fight for customer. The Czech Republic considers just SME as basic stone of its economy. Conception of cluster, revealed in the Czech Republic relatively not long ago, is one of possibilities how to increase competitiveness of this segment. Cluster foreruns reputations of a successful instrument of economic growth together with many well going and well developing examples from foreign. It is expected that Czech entrepreneurs will use its hidden potential. The state helps with its development programs to these expectations. In Moravian Silesian region cluster entrepreneurship effort gave to start up functional clusters and cluster initiates. The author of article tries to describe up to now state and development of these existing organizations and with distance of time uses possibility of rating of fruitfulness or unsuccessfulness of clusters in region too. The article want not be only describe or informative material, but wants to show specific problems with founding, building and development of clusters in Czech entrepreneurial conditions.

Keywords

Cluster, Moravian Silesian region, development,

1. Introduction

Significant phenomenon of present globalize economics is, that still bigger role in economic development of national economics play regions, in which concentrates economic life of given country. Rather than about national economy development it can be talked about regional development. In advanced European and world countries are just the chosen regions, which determine development of country

economy. Current trends of economic development content words such as competitiveness a productivity, innovation and systems of innovations, company networks and clusters, cooperation and overfilling of knowledge, etc. Just clusters are possible to consider as driving machines to reach economy prosperity of given region on the base of interconnection of public, privacy and university sector. The article deals with role of branch clusters in regional development of Moravian Silesian region, which belongs to traditional regions of industry concentration in frame of Czech Republic. This new view on formulation and realization of economic development policy in advanced world economies is in current time very popular and namely to idea of cluster is laid big emphasis as to tool of competitiveness development of small and medium entrepreneurship segment. By method of cluster analysis in Moravian Silesian region is demonstrated implementation of new cooperation form between SME in the Czech Republic.

2. Small and medium entrepreneurship in the Czech Republic

Small and medium entrepreneurs play significant role by creating new work opportunities and generally act as factor of social stability and economic development. The European Union considers this sector as backbone of European economy and driving power of innovation, employment and social integration. The Czech Republic is country, in which has next character of small and medium entrepreneurship development, regarding to its significance in economy, essential fall to total economic and also social country development and its single regions.

Just small and medium entrepreneurs are basic for creating perspective clusters. That is why Czech Republic government has created programme conception of SME development for period of 2007-2013, which beside other considers as important active support of clusters and clustering.

The initial states of SME are these characteristics, by which is marked in current time Czech SME:

- Small and medium entrepreneurs represent stabilizing component namely from view of employment, where they permanently keep share tightly over 60 % of total employment with light grow tendency,
- Small and medium entrepreneurs were up to now able to keep step with efficiency and performance development in big companies. It shows keeping of their share on GDP and export (about 35 %), outputs and produced added value (about 50 %),
- Small and medium entrepreneurs significantly overweight from point of view of share on employment and added value in hotel industry, services, trade and building industry by share of 80 % and more,
- In industry and transport has SME approximately third share on employment and on added value,

- Growing and relatively high is share of SME on total investments realized in the Czech Republic, which overreached 50 % and this trend is keeping on,
- From point of view of SME structure have most significant share entrepreneurs acting in some branches of processing industry, trade and services,
- Outlasting technological backwardness in many branches is for reaching of necessary competitiveness up to now compensated by cheaper work force and by relatively long real work time

2.1 SWOT analysis of small and medium entrepreneurship in the Czech Republic

Small and medium entrepreneurship is in its development influenced as by entrepreneurial environment, including its infrastructure, as by real existing state of particular companies.

Table 1: Swot analysis of Czech SME

Strengths	Weaknesses
<ul style="list-style-type: none"> - ability of country to draw up massive investments of big companies from foreign with positive falls on total economic grow and development of markets for small and medium entrepreneurs, - tradition of industrial and craft production, - tradition of specialized education system, - created system of SME tools support, existence of specialized institutions for entrepreneurship support, - geographic advantage of country territory – availability of significant markets, transit potential, - presumptions for active travel industry development, - good telecommunication infrastructure, - relatively high qualification and professional work force adaptability 	<ul style="list-style-type: none"> - insufficient natural motivation for entrepreneurship caused by interruption of entrepreneurial traditions for tens year, - complicated tax system, namely from point of view of the most little entrepreneurs and high total loading, namely off-takes to health and social insurance, - low effectiveness of law claim ability, - administrative demanding ways of founding new entrepreneurial subjects, - insufficiently developed system of specialized services (financial, trade, technical etc.) for micro and small companies, - insufficiently developed system of whole life entrepreneurial and its employee education, - limited possibilities of national economy for creating widely structured financial market,

	<ul style="list-style-type: none"> - administrative demandingness by obtaining direct supports for entrepreneurialism, - insufficient connection to research and development with entrepreneurship sphere, - no-being of support innovation tools aimed to small companies projects with very short history, - relatively generous social system with insufficient pressure to part of inhabitants to connection into work process, - insufficient interconnection of specialized and language knowledge and practises by employees - work power structure from point of view of its qualification and localization
Opportunities	Threats
<ul style="list-style-type: none"> - creating of long-term material base for educational and counselling services for entrepreneurship development, - simplification of procedures for entrepreneurial subjects founding, - reinforcement of creditor right and creating conditions for constructive procedures by solution entrepreneurial insolvency, - improving of intellectual ownership protection (patents and patterns) - simplification of entrepreneurial communication with country administration with using informative and communication technologies, - aimed propagation of entrepreneurship, - simplifying of tax system, - implementation and development of whole life education, - increasing of risk capital offer for financing innovative aimed projects of 	<ul style="list-style-type: none"> - decreasing of financial funds from EU structural funds as result money problems utilization in period 2007-2013, - not harmonized government and regions procedures in activities aimed to entrepreneurship support, - unbalanced structure of direct and indirect entrepreneurship tools support and priorities of SME development - insufficient implementing capacity for using of increased range from structural funds

small companies with very short history, - creating new ways of effective tools implementation of direct entrepreneurs support, - taking out of temporary administrative barriers by infiltrating domestic companies to EU markets - expanding of SME support to some up to now not supported activities	
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Source: www.mpo.cz

From showed SWOT analysis is obvious, that for Czech SME flows significant range of opportunities to development, but existence of many weak aspects, indicates about vulnerability of this sector. If they won't be taken out or at least reduced, than menace real losses.

3. Clusters and Czech Republic

Clusters are in the Czech Republic officially supported by programme document under call National cluster strategy for period 2005 to 2008. This document sums up main reasons, general principles, proceedings and objectives of successful economic cluster model application in conditions of the Czech Republic. Document comes from international experiences of cluster initiatives, which are central components of industrial, regional and innovative policy creation in all advanced world countries and which are still more putting across in revival processes of stagnating regions and in support of industrial branches based on new scientific piece of knowledge.

Clusters are in conception of National cluster strategy understood as tool of national and regional development and offer one of answers to basic aim of government strategy of Czech industry development, which is increasing of competitiveness. National cluster strategy is in harmony with Strategy of the Czech Republic economy grow and National innovative strategy and puts as aim to reach whole batch of concrete aims:

- To use clusters to sources interconnection of Ministry of Industry and Trade, Ministry of Regional Development, Ministry of Labour and Social Affairs and region of the Czech Republic by aimed and coordinated way, which will maximize fall of support provided from public funds. This aim supposes to integrate programme proceedings of other strategies and conceptions like SME development, innovations, research and development, export, education or infrastructure.

- To make effective communication with regions, institutions of tertiary educations and private sector with aim of common priority development. Namely is effort to deepen dialog with whole industrial branches and not only with single companies through more detailed understanding to strong and weak aspects of entrepreneurship in region frame.
- To ensure identification and support of branches and subject fields with necessary grow potential and will to increase competitiveness through cooperation and innovation, particularly in regions, which demonstrate decision to support innovative clusters. Aim is to connect to cooperation first of all small and medium companies, regional partners including representation of entrepreneurial subjects (e.g. Economic chamber of the Czech Republic and economic chambers in regions, associations) and to develop innovations and to increase export.
- To help SME groups to work together on opportunity identification to cost sharing and to overrun traditional grow barriers, which are e.g. access to funds and information technologies, performing of research and development and bringing in new products on market. Aim is to support subject connection to technological platforms rising in EU frame.
- To create frame for analysis, monitoring and evaluating cluster initiative performance and their fall on regional and national economy. Part of evaluation will be cluster comparing with one another and mainly comparing with foreign cluster initiatives.
- To work out National cluster study in the Czech Republic, its result will be identification branch with export potential in regions. On the base of regional research results to work out total study of industrial structure in the Czech Republic, which will contribute to planned programs in frame of structural funds in next programme period.

3.1 Role of Ministry of Industry and Trade

MIT is responsible for proposal and preparation of entrepreneurship programme support and industrial research, development and innovation programmes in Czech Republic. Ministry is competent deputy of realization regional development programme based on clusters.

Main aims of government and costs for entrepreneurship support are in harmony with Lisbon criteria, which is company competitiveness and increasing its ability to compete supporting innovative products and services.

Though frame of this strategy is developed on national level, its results will be reached on regional or lower level. MIT has significant representation yet and results in regions on base of activities financed direct through implementing agencies and Czech Moravian Guaranty and Developing Bank:

- Czechinvest supports SME and institutions of tertiary education and helps to increase industrial real estate infrastructure and total entrepreneurial environment including support of direct foreign investments flood.
- Czech Trade supports exporters by wide scale of services.
- MIT provides direct support to projects of research and development with linkage to industrial sphere.
- The Czech Moravian Guaranty and Developing Bank provide financial support to beginning and existing SME.

These support programs are proposed on national level on the base of understanding to entrepreneurial requirements and evaluating of key national sectors. However it mustn't in definite moments reflect strong aspects and potential of concrete region or its part. In addition separate agencies have tendency to work independently on each other, what can lead to insufficiency of programme coordination.

It is necessary, that companies will be initiative themselves "from below" and they should feel potential benefits from cooperation leading to improving their competitive position. This access should make possible better dialog with creators of government strategies and policies and support organizations too, between them belong to also e.g. economic chambers, specialized for implementation of these policies with result effect of needed coordination.

International practise and specialists on economy development from most successful world economy confirm that clustering is effective way to reach these aims. Current programmes worked out by MIT and its agencies are supporting many from building stones of successful clusters from point of view infrastructure, education, research and development and innovations. From this reason MIT initiated in all region of Czech Republic Operational Programme Entrepreneurship and Innovations – Clusters.

3.2 Financial funds for realization of National cluster strategy

Table 2: Suppose of financing in years 2005-2008

	2005 budget	2005-2008
Funds total (Euro)	1 265 700	14 627 250
Funds of Structural Funds EU (Euro)	949 200	10 970 450
Funds of State Budget (Euro)	316 500	3 656 800

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3.3 Clusters support in Operational Programme Entrepreneurship and Innovation 2007-2013 (OPEI)

- Programme COOPERATION is aimed on improving of entrepreneurship conditions and innovation and competitiveness advantage development and improving the quality of linkages between research, universities and entrepreneurial sphere,
- Programme support in form of grant is assigned to rise and development of cooperative branch grouping:
 - Clusters,
 - Poles of excellence,
 - Technological platforms.

Supposed term of call announcement for project discovery is 4th quarter 2007

4. Cluster identification in Moravian Silesian region

Moravia Silesian region is traditionally understood as industrial region and is connected with mining and metallurgy. In reality is in present-day its productive basement strongly diversified.

Meanwhile some clusters create spontaneous, the best practices of modern economy development shows, that as government as regional self-autonomies could play significant support role helping clusters to develop and expand. There, where such support has formalized into integrated programme of activities with aim to help cluster development by full or partial government financing, we talk about cluster initiative. Financial support for clusters, which made possible rise of wide scale cluster initiatives in whole country, is in Czech Republic accessible through OPEI. Some cluster initiatives support existing clusters, other concentrates to development of new clusters. In case of MS region we can identify up today totally 4 cluster initiatives in II. Phase of Programme Clusters OPEI, which start up as new company groupings, which main goal is to increase region competitiveness as whole. It is dealing first of all about Moravian Silesian machine cluster, further Moravian Silesian automobile cluster, IT cluster and Moravian Silesian lumber cluster. In I. Phase is Hydrogen cluster, with specialization in hydrogen technology, Envicrack cluster with specialization in renewable source of energy and Building cluster. Some actions have been done round cluster aimed to recycling of automobiles, cluster dealing with car haulage and finally cluster working in travel industry.

4.1 Done cluster activities in Moravian Silesian region

2002

- Pilot study of regional clusters in MS region – study done in purpose of recognition clustering of various branches, as most optimal branch for cluster founding is machine branch

2003

- Founded registry of machinery companies in MS region
- Founded Moravian Silesian machinery cluster
- MS region is plugged into project ACENET – cooperation with 8 EU regions

2004

- Organization of conference Clusterforum 2004
- Taking part in course for certification of facilitators by agency Czechinvest
- Cooperation on strategic and methodical documents for Czechinvest/MIT
- Projects of I. Phase Cluster OPEI programme – cluster initiatives for: IT cluster, Lumber cluster, Hydrogen technology cluster, Automobile cluster

2005-2007

- Projects of II. Phase Cluster OPEI programme – founding and development cluster organizations – study of practicability
- Founding ClusterNet initiative
- Region is plugged into project NICE (2005-2008)
- Expression of interest for taking part in project CLOE – INTERREG IIIC

In following paragraphs will be just paid attention to mentioned fourth clusters, its characteristics and identification their problems touching cluster activity.

4.2 Moravian Silesian Machine Cluster (MSMC)

Machine industry is beside automobile production the most significant export branch, employer and recipient of foreign investments in Czech Republic. Nearly 2/3 from nearly 153 000 employee of Czech machine industry work in SME or middle big companies.

It is first founded cluster in Moravian Silesian region (2003) and it has the biggest member base (43 members). By its character fills long time region tradition and further links to it. Cluster represents its vision formulated so:

To 5 years build up in MS region highly prestige and modern machine base ready from point of view of human resources, new technologies and innovation on rise of

sub supplier chains in area of strategic project for energetic industry, transport industry and building industry in global scale.

With founding MSMC gone together “wave” of verve, however gradually fell down. Decreasing cluster activity in next three years illustrates table of member base development:

Table 3: Moravian Silesian machine cluster and count its members

2003	2004	2005
35	30	18

Source: www.msskova.cz

To stopping this trend and reviving MSMC “commanded” Meeting of members MSMC. It was voted new cluster leadership, which set new visions and strategic aims. Reviving brought also OPEI with programme Clusters, which enabled to begin work in frame of project “Searching of proper companies for restructuring MSMC” and again started up cluster activity and activated members.

Result of these activities is growth of member base to 43 members, it is double of level member base from begin 2006. Till finish I. phase of programme Cluster is supposed reaching 40 members. It succeeded to reach 66,67 % share of small and medium companies (necessary condition for obtaining support for SME) though MSMC arch over by its member base over 19 000 employee and turnover more than 1 828 410 000 milliard Euro. It means that MSMC is in current time the biggest cluster in Czech Republic.

After finishing I. Phase of programme Cluster walks over MSMC fluently to II. Phase – cluster development. For this pass are already realized crucial steps, which lead to filling Main streams of clusters development for II. Phase.

Cluster aims:

- To get to world peak in chosen branches of machinery (energetic)
- To build up base of technologically applied research, development and testing by Machinery innovative park and to create pole of excellence for area of machinery as long lasting source of innovations and technologies,
- To represent, support and lobby for machinery interests and related companies not only in region and help to employment grow and region richness
- Retrieve machinery in eyes of public and to return to it its original position as strategic branch in Moravian Silesian region
- To wide spread membership base till 2008 up to 60 members
- To support MSMC development and its members through EU funds

Problems and barriers which is MSMS dealing with

- Shattered small productive companies with nonexistent global strategy
- Leaders have partial successes in foreign and behind them technological, marketing and investments gorge
- Nonexistent supply chain
- Minimal investments to modern technologies
- No or minimal SME investments to top machinery technologies
- Fast growing no European machinery park (China, India)
- Minimal count of globally successful products
- Too little of project managers and abstention of research capacities
- Lack of quality products
- Lack of qualified work force
- New technologies
- Raw material prices
- Shorting life cycles of products
- Internationalization and globalization of multinational companies

4.3 Moravian Silesian Automobile Cluster

Moravian Silesian Automobile Cluster (MSAC) was founded in purpose of innovation support and competitiveness increasing and export ability interconnected companies, entrepreneurs and institutions working in MS region. MSAC is cluster in I. phase, based in October 2006. Commission is development of automobile industry in region, through strong branch industrial company grouping, universities, scientific-research institutions and next subject of private and public sector was assured everlasting competitiveness of regional sub suppliers for automobile industry in Czech Republic and in foreign. Created conditions for increasing level and full using of local human and technical capacities and strengthen MS region image as perspective region for live and entrepreneurship.

From point of view of dynamic automobile industry development in global scale, concentrating to strengthen economic development of MS region with aim to automobile industry branch, strategic investor come to region (Hyundai) together with following investments is for creation MSAC natural reaction of regional companies on newly emergence situations. In current time comes to in branch to crucial strengthening and productive capacities movements of world automobile producers towards to new markets, wholly fundamental aiming of whole industry branches to production for final automobile producers.

It can be claimed significant strengthening of foreign capital in MS region. Last year it "flew in" record 1 898 734 200 milliard Euro, from this amount is just

1 090 014 000 milliard Euro aimed for building up Hyundai automobile factory. Own car production will start in 2009, two years later should company produce planned amount 300 000 cars. Till this time naturally share of production for this industry sector will grow significantly.

Aims of MSAC

On the base of MSAC potential member evaluation (31 members) and outer presumptions was defined this vision:

“By full use of MSAC members potential by filling existing and future opportunities in automobile industry branch to double MSAC member count in supplier batches 1- 3 and till 5 years reach enlistment of 80 % MSAC members between certified suppliers for automobile industry”.

- To increase MSAC member competitiveness in automobile industry branch to level, that 80 % of cluster members will be not only certified, but also real suppliers to automobile industry producers.
- To ensure enough qualified work force for MSAC member needs as in area of top and middle management as by using opportunities in automobile industry branch in region
- To reach, that MSAC will be taken as equivalent partner by negotiation with final automobile producers and that MSAC will become platform for mutual problem solution and opportunity using in automobile industry branch in region
- To ensure development of research development base in region, that human and technical capacity in this area will double during 3 years.

Cluster projects

Singular areas of mutual company interest wholly reflect their needs and it found response in mutual cluster projects, which is for period 2007 and half 2008 defined 12.

1. Mutual experimental laboratory for noise measurement
2. Certification programmes
3. Research of relevant markets, mapping and need fore sighting of final subscribers etc.
4. Taking part on trade fairs and conferences
5. Supplier development
6. MSAC development as sub supplier base for automobile industry
7. Restructuring existing and suppose of new modification and finalization line including logistic process with aim to supplies for automobile

industry and machinery in conditions of metallurgic and machinery companies – MSAC members

8. Research of industrial law situation
9. Building up and development of technical and human cluster infrastructure
10. Foreign service travels
11. Informative and counselling centre for European Structural Funds utilizing

For these projects obtain MSAC cluster grant from OPEI programme – Clusters “Founding and development Moravian Silesian Automobile Cluster”

4.3 IT cluster

In the beginning of 2006 rise after more than one year in Ostrava new cluster aimed to IT area. Its conception this grouping joins educational institutions and entrepreneurial subjects to unit, its commission is to ensure preparation of human resources, to create potential for solving innovative projects and to ensure mutual activities in marketing area. From point of view of preparation human resource is main priority company pulling into doing business in IT area into educational processes not only in university, but also in high schools and institutions dealing with whole life education.

On the second side apparent effort exists to apply on the market research and development results through company cooperation with academic sphere. Aim is to apply reached results in science and research area and to ensure their transfer to appearance commercial oriented products. In not last batch is effort for building up strong mark IT Cluster, which defines MS region as centre of advanced technologies, where IT plays key role. Cluster members (32 members) are strengthening idea of building up strong IT region, where idea informative society becomes reality.

Good news is, that nobody from original basing members didn't leave clusters and next are reporting.

Awaited benefits

- Rise of platform for mutual company communication in region in IT
- Quality guaranteed – given by connection university and companies
- Participation on region development- is members ambition to take part on region transforming and using all possibilities, which development brings
- Cooperation with entrepreneurial subjects and regions institutions – to hear their needs and influence their activity

- Mutual activities of cluster members – to cooperate and create synergic
- effects

4.4 Moravian Silesian Timber Cluster (MSTC)

Cluster is founded in 2005 and has 28 members.

Cluster aims:

1. to initiate, support and coordinate cluster member cooperation, in order to reach competitiveness increasing, economic grow, export and increasing amount of implemented innovations
2. to propagate MS region and MSTC an its members
3. to promote timber in building industry
4. to create new impulses leading to development of timber industry in MS region
5. optimalization of chain value

Main cluster activities

1. cluster propagation and its members

Propagation of mark MSTC, propagation of grouping MSTC and cluster members through internet presentation, registration on public portals, advertisement in medias – specialized periodicals

2. Counselling activity

Special offer for cluster members includes product package – counselling activity in area of request from structural funds, or other grant titles and help by ensuring financing whole project

3. Cost saving

Project financing

Programme clusters counts with financing whole project from cluster members only up to 35 % acknowledgeable costs.

4. Innovation

MSTC cooperates with Technical University Ostrava on laboratory equipment with wood. This facility will be fully for disposal to all cluster members.

5. Arranging seminars, expositions and fairs

6. Access to offers and demands of foreign business partners

5. Conclusion

Between biggest problems which are cluster initiatives in Moravian Silesian region dealing with belongs mutual mistrust between member's singular clusters. This problem flows from cluster essence, when actually members of given cluster stay at once competitors in branch, but way of cluster functioning force them to communicate internal sensitive information and so reveal eventual weaknesses to competitors. This barrier blocks successful development and cluster functioning in full range, because cluster builds its advantages on cooperation and sharing certain mutual values.

Next problem is certain ration of member unwillingness to invest time and finances to mutual cluster effort. It again flows from mistrust in possible successful cluster functioning as tool of competitiveness increasing its members. In sequence to this problem can be said, that in Moravian Silesian region are missing qualified facilitators, with enough experience, who should be able to take off these mutual mistrust barriers.

Region leading spends big effort in form of increased propagation and information between entrepreneurs, just in clustering. Cluster became significant building rock of regional development, quite not little financial support is proof about that.

Every beginning are hard and it is necessary to believe, that starting problem with cluster development will pass away and Moravian Silesian region will demonstrate, that Czech Republic fully belongs between EU countries not even with its membership in EU, but also with prospering cluster groupings.

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