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**ECONOMY DEVELOPMENT WITH INTRODUCTION OF CLUSTERS**

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***Abstract:*** *One of the most essential goals of the contemporary European Union development policy, which is supported by so-called Lisbon strategy, is to develop and strengthen a competitive knowledge-based economy. Experience gained in some European regions and elsewhere, whose success is mainly due to very sophisticated and new technology-based company networks, so called clusters, corroborates this. This paper deals with analysis of cluster introduction in Slovenia, Macedonia and Croatia.*

***Key words:*** *knowledge-based economy, network organization, clusters, key competence.*

**1. Introduction**

Networking regions and their potential innovation-based development, particularly development of ‘attractive lines of business’, cannot function without development of clusters. Contemporary clusters, or their core, consist of innovative companies that are either vertically (buyer/supplier) or horizontally linked (common customers, technology etc.). However, their geographic concentration is an additional component to the innovative one.

The concept of cluster is widely spread in all areas of social life and work: economy, information science, information technology, accounting, education, etc. (Bell, 2005). Since the subject matter of this paper is concerned with economy, i.e. economical development of a region or a country, our attention will be focused on the role and significance of clusters in this segment.

Michael Porter popularized the concept of industry clusters in his book The Competitive Advantage of Nations (Porter, 1990).  Porter developed the “Diamond of Advantage” that contains four factors, which create a competitive advantage for companies.  The four corners of the diamond include factor conditions, demand conditions, industry strategy/rivalry, and related and supporting industries.  Porter used this diamond to determine which firms and industries had competitive advantages, and his emphasis on the importance of related and supporting industries aroused interest in clusters.  While his original thesis was applied to nations as a whole, Porter recognized that the majority of economic activity takes place at the regional level.

It should be emphasized that, due to the lack of relevant information and owing to the highly demanding process of cluster formation, a simplified case studies in Slovenia, Macedonia and Croatia is shown here.

**2. Case STuDIES**

**2.1. Case study of Slovenia**

The Slovenian tool-making cluster faces this problem by trying with intensive investing into the technological development and developing the relevant technological infrastructure to assure the conditions for the required innovative operating of the collaborating companies and organizations. All this is an integral part of the strategy of the technological development TCS (Toolmakers Cluster of Slovenia) which is based on identifying the key knowledge, technologies and defining the required technological infrastructure and the program of the development projects. The target of the TCS is to be an "innovative cluster" whose basic components are the "innovative companies" (Semolic , 2002). Therefore in the TCS we try to develop an innovative environment ensuring faster and more successful execution of the required innovation processes in the collaborating companies and organizations. Also the projects such as the development and associating into international networks of knowledge centers, the development of technological centers and of companies' development infrastructure are a part of the developments of such an innovation environment. In this way we want to establish the best possible conditions for technical innovations, innovations in companies' management as well as innovations in the area of marketing.

The STR-TCS is an integral part of the development strategy of the Slovenian tool-making cluster based on the above mentioned identification and concentration of the TCS on the key technologies which in the same time represent the key competences, with which the TCS establishes itself on the world market. Identification and development of supporting technologies, which are also important for the development of the TCS, are a part of the technological development of the TCS. The key technologies apply to the technology of manufacture and technology of products sold by TCS to its buyers. Supporting technologies apply to all areas of the technology and business activities important for the business operations and development of the competitive capacity of companies and organizations included in the TCS.

The TCS does not develop and manufacture the tools, but it associates the companies and organizations, doing that, including all the business entities cooperating in that activity and supporting it with their products or services. The TCS strengthens the business capacity of the collaborating companies and organizations through agreed areas of business collaboration. Those areas include (Semolic, 2004):

* control of relations with buyers – the purpose of associating is to increase the competitively of companies on the key markets of the TCS,
* control of supply chains – the purpose of associating is to reduce the purchase and manufacturing costs and
* joint research/development activity – the purpose of associating is the acquisition of new knowledge and technologies necessary for the development of the competitive capacity of companies included in the TCS.

**2.2. Case study of Macedonia**

The last 10 years have witnessed several attempts to enhance small firm competitiveness through the promotion of the cluster concept in Republic of Macedonia.

However, only the active cluster members experienced increases in exports and productivity, but not the sector/sub-sector as a whole; thus there was no “ripple on” effect. Also, there was no visible increase in employment and in remuneration levels, but the report noted qualitative improvements in the professional and business skills of the programme participants. Most importantly, little, if any, self-organisation and representation of the cluster enterprises emerged, and synergies and linkages have not developed beyond the initially identified member enterprises.

Putting these – not too encouraging – results into a wider perspective, it must be noted that all WBCs countries have initiated projects focusing on the promotion of clusters and their competitive advantages; many of these projects have been funded by GTZ and USAID (INOTEH, 2005).

For example, clusters were established in Croatia in the following sectors: wood industry, graphics, construction, IT, leather and footwear, tourism, shipbuilding, medical equipment, utility equipment, food, metals. According to an evaluation report by the Croatian Ministry of Economy, the clusters in the northern parts of the country are the most viable ones, but weaknesses include a lack of cooperation between the participating entrepreneurs, and a lack of institutional support. Moreover, only a few clusters were demand-driven, rather than donor-initiated.

The Ministry of Economy and Agency for Promotion of Entrepreneurship of Republic of Macedonia are also pursuing the development of new clusters in the following fields:

* Automotive industry and construction
* IT sector: software development and export
* Agribusiness: cooperation among vegetable producers for organised sale and export
* Dairy: cooperation for restructuring and to compete with foreign brands pushing into the market
* Furniture: joint sales and promotion activities, shared services and workforce training.

**2.3. Case study of Croatia**

In the lack of a unique and commonly agreed economic strategy at the national level, the Split-Dalmatian County has decided to define its own goals and priorities and to develop its own potentials. As a result of this decision there is a recently brought Regional operational programthat defines the guidelines for the development of the County in the next five-year period (Veza, 2005).

Pointing out the need for regional and inter-regional networking, integration and clusterization of County economy, is the first step that has to be taken in order to start with more intensive research that will help in identification, organization and development of the above-mentioned networks. Bearing this in mind, this paper presents a model for identification of basic technologies and potentials and for development of industrial clusters in the County.

The basic activities are defined by analyzing the position of an industrial activity in a quarter of the quadrant shown in Figure 1 (Veza et all, 2006).

 **A**

**KEY ACTIVITIES**

Goal: Growth & Development

**C**

Small suppliers/

enterprises with

customers within

the County

Goal: Growth

 big

Degree of

Suppliers/ manufacturers of

competitive products

Goal: Increase number of customers and/or suppliers

 **B**

Activities (not

enterprises), not

very significant for economy of the County

**D**

expansion

of an

activity in

the County

 small small big

 Size of an activity in the County

Fig. 1. Defining key activities

A measure adopted for the size of an activity in the County, is “share of the revenue structure of an activity compared with total revenue in economy” on the abscissa, and a measure adopted for a degree of the activity expansion is “number of entrepreneurs”.

On the basis of the position of the activity in Figure 1, two basic industrial activities have been defined (quarter A), which are considered to be the most significant for development of the Split-Dalmatian County at the moment. They are:

1. Production of other vehicles (The Split Shipyard, the Trogir Shipyard, Brodoremont Vranjic etc.)
2. Production of food and drinks (Prerada, Dalmesso, SMS, Dalmacijavino, Coca Cola etc.)

**3. Conclusion**

Strategic goal of regional development is to provide conditions for innovations based on regional identity. However, in order to achieve this goal it is necessary to do the following:

* To ensure transparency with regard to the existing technological competence,
* To link regional resources and competent institutions (universities, institutes, enterprises, chambers of commerce etc.)
* To identify the existing potentials for development of clusters in the context of development of attractive regional lines of business,
* To establish new cultures of regional exchange of knowledge and experience.

Therefore, it is necessary to make a transition from the regional strategy based on predominantly industrial production to an economic development strategy based on knowledge. Linkage of economy, scientific institutions and regional management can be achieved by using a triple helix model, which provides required prerequisites for the transition of a society towards knowledge. In order to redefine the interrelationship between institutional knowledge, economy and regional management, it is of utmost importance to enhance the local conditions for development of innovative processes by linking together research activities with others. Our aim is to continue our preliminary research and to develop such models of linkage.

Benchmarking between three case studies from Slovenia, Macedonia and Croatia have shown similar approach of economical development based on introduction of cluster.

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