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# CLUSTER DEVELOPMENT STRATEGY IN THE CONTEXT OF THE "KEY NATIONAL CLUSTER" COMPETITION

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**Abstract.** The role of cluster development strategy is discussed, in the context of Polish "Key National Cluster" (KKK) competition. According to formal KKK regulations, the status of a key national cluster can only be granted to those selected few clusters which fulfil the detailed preconditions stated in the document, such as the postulate to offer support for regional specialisation. The paper places emphasis on the significance of management, as an area of great impact in the determination of key status of clusters. In fact, the KKK competition is designed to evaluate formal strategies of cluster development in a multi-stage approach, including expert feasibility studies. In addition, the paper discusses changes in the national approach to cluster policy, as observed in the statutory activities of Polish cluster support system over the last few years. Those changes were dictated by the need to offset the general tendency to place emphasis on the quantitative aspects of development, as opposed to the postulated focus on the quality and competitiveness of cluster structures.

Key words: strategy, cluster, key national cluster

### INTRODUCTION

Cluster support has been a subject of increased interest over the recent years, both in professional literature and in practical business application. Despite considerable outlays offered in support of formation of new clusters and cluster agglomerates, many beneficiaries of such aid have since perished or found themselves at the verge of profitability, hoping for the next edition of the financial support programme to provide them with means to continue their operation. Observations of trends and potential directions of aid funds directed to this type of enterprises suggest that only the fittest have a chance to survive in the foreseeable future. Such was the main premise behind the idea of "Key National Cluster" competition (KKK). According to the programme's formal assumptions, KKK

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serves to identify and officially recognise clusters of key significance for Polish economy, with good potential to compete on international markets. In this sense, KKK awards should be interpreted as yet another of the many instruments available for the realisation of the national innovation policy, and, consequently, of great impact for the development of Polish economy. Analyses of formal cluster development strategies are one of the crucial elements of evaluations conducted under the KKK programme.

This paper presents the role of formal development strategies in the evaluation of clusters, in the context of their application for the status of a key national cluster. Formal and merit criteria are also discussed, as required from clusters that apply for the KKK status or its prolongation.

#### THE NOTION OF STRATEGY

Strategy of development plays an increasingly important role in the operation of enterprises, also those of specific characters – such as clusters<sup>1</sup>. While companies have long adjusted to the need to formulate strategic objectives in formal documents, the same cannot be said for other types of institutions (e.g. clusters) where formulation and implementation of formal strategies is a fairly recent notion.

Despite considerable outlays, including the EU fund support for cluster development, some of them are doomed to fail, because their present form of operation does not offer them any competitive advantage. Furthermore, some of them have never had a chance to develop proper cooperation networks within their structure. Consequently, only the strongest contenders have a prospect of surviving on the market – ones that have a clear mission and vision, expressed both in operational and development-related dimensions.

However, it must be noted that the above approach to cluster operation and functions is also fairly recent, and that it received proper recognition only after the introduction of the KKK programme which places great emphasis on the need for key clusters to have a solidified and formally expressed strategy of development.

To begin with, it may be useful to define the notion of strategy. It must be noted that the theory of management provides no universal definition of the term, and the available approaches tend focus on different aspects of the process. According to A.D. Chandler, strategy is the determination of the basic long-term goals of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals [Moszkowicz 1994]. P.F. Drucker in his definition places main emphasis on the analysis of the present situation; in his approach, strategy involves determination of the present conditions, which may be followed by change, if such a change is found to be beneficial for the company [Koźmiński and Piotrowski 2010]. G.A. Steiner in his broad

<sup>&</sup>lt;sup>1</sup> One of the most popular definitions of clusters, by M.E. Porter, identifies them as: "geographic concentrations of interconnected companies, specialised suppliers, service providers, firms in related industries and associated institutions (for example universities, standards agencies and trade associations) in particular fields that compete but also co-operate. Critical masses of unusual competitive success in particular business areas, clusters are a striking feature of virtually every national, regional, state, and even metropolitan economy, especially those of more economically advanced nations" [Porter 2001].

definition of strategy includes supplementary aspects of the process: company mission, plans for development, and operating programs, together with means and methods required for strategy implementation and realisation of company organisational objectives [Koźmiński and Piotrowski 2010].

It may also be interesting to note that, apart from many definition of strategy, professional literature provides a number of strategy classifications based on various criteria (for instance, offensive versus defensive strategy).

To sum up the preliminary findings, strategy may be considered as one of the basic and fundamental instruments for managerial purposes, and a source of potential success of companies (and clusters) on the market.

## THE EVOLUTION OF CLUSTER FORMATION AND DEVELOPMENT PROCESSES IN POLAND

Changes in formal approach to cluster support in Poland resulted from the lack of universal (or standard) model of a cluster support policy, despite strong involvement on the part of the EU legislator. Some Member States have already introduced their own comprehensive programs of cluster support, while others attempt to capitalise their results using a benchmarking approach to analyse, modify and adjust the most effective instruments to the requirements of their domestic markets.

The early approach to the policy of support for cluster development in Poland had the following characteristics [Szultka 2012]:

- strong role of the coordinator;
- inter-regional differentiation;
- the lack of coordination between the regional and the national level;
- high dispersion;
- soft support (as opposed to financial support for investment);
- cluster cooperation (as opposed to business cooperation).

It must be noted that the cluster development policy in Poland – or, more accurately, formal support for cluster development – has intensified with the increase of EU funds directed to this sector, with a marked expansion of cluster-type formations observed after 2007. A 422 million PLN was assigned as support for cluster formation, with further 71 million additional aid for cluster development in eastern regions of Poland, and 14 million to support coordination and information dissemination activities. A sizeable support was also directed from regional (self-governmental) authorities within the framework of EU Regional Operational Programmes [Zachariasz 2012].

Despite such strong support for cluster formation, many beneficiaries have already failed to survive on the market, and numerous others will follow suit before the end of the present edition of the cluster support programme. This, in part, may be a result of the adopted practice of forming clusters with the intention of soaking up the EU funds, as opposed to a purely market-oriented approach. The present condition of clusters in Poland is clearly a direct consequence of this approach.

In view of the above, the present cluster support policy, as part of the regional support programme, was designed to stimulate their competitive advantage and to transform com-

pany agglomerates into dynamic clusters integrated around common goals. The activities in this respect are mainly focused on:

- research and development;
- support for cluster expansion to foreign markets;
- development of human capital and its quality;
- stimulating inter-sectoral cooperation;
- support for new enterprises.

The regional development policy offers support for cluster-type organisations and other actors involved in cluster management. To be eligible to receive this type of support, cluster organisations or cooperation networks are required to satisfy certain preconditions, such as the involvement of regional authorities and the potential for cooperation between self-government authorities, scientific centres and market organisations. Their operating activities should also be in line with the requirements and the objectives of other policies: industrial, transportation, infrastructure, investment (including FDI), and science [Krajowa Strategia... 2010].

The central idea behind the Key National Cluster programme was to eliminate the deficiencies of the former round of support. Status of a key national cluster is designed to recognize and confirm the recipient's competitive advantage and economic significance, both in regional, national and global dimension. In line with the KKK definition, the key status of clusters is recognised on a national level based on a number of criteria, such as: critical mass, potential for development and innovation, the scope of present and prospective cooperation, the experience and market potential of the coordinating entity, and the quality of management (http://www.mg.gov.pl/Wspieranie+przedsiebiorczosci/Polityki+przedsiebiorczosci+i+innowacyjnosci/Klastry/Krajowe+Klastry+Kluczowe, accessed: 29.10.2015).

It is also worth noting that the number of cluster formations should be limited, since it seems quite unreasonable to expect for Poland to build its competitive and innovative position in many areas in parallel. Lastly, the formal recognition of key national clusters should be based on reliable evaluations of Poland's economic potential and feasible plans for its development through the use of various technological and non-technological innovations, R&D, and other instruments that increase the chance for knowledge transfer and the advance of new technologies.

### CRITERIA FOR THE EVALUATION OF FORMAL CLUSTER DEVELOPMENT STRATEGIES

Local administration bodies are increasingly more involved in the task of formulating strategies and programmes for economic development – this trend is also observed with relation to cluster policies, as evidenced by the "Key National Cluster" competition. In line with the guidelines of this programme, candidates are required, among other things, to demonstrate their commitment to a strategy of development. It must be noted, however, that the evaluation of this requirement is not reduced to a mere ascertainment of the fact, but involves a number of merit-based aspects of such a strategy. For the subsequent editions of the programme, the strategic documents submitted by candidates will be sub-

ject to formal and substance examination and expert evaluation (in the form of an expert panel).

With respect to formal requirements, the legislator stipulates for clusters to "have a formal and updated document expressing their strategic objectives. The form of such document is open. The strategy should cover a period of no less than three consecutive years. Such strategy should be accompanied by an updated plan of activities, detailing bundles of projects for the realisation of the company vision and the strategic objectives expressed in the document, together with suitable benchmarking methods" (http://www.pi.gov.pl/PARP/chapter\_86197.asp?soid=6701640B52A54EE3A5BCA9CF2EADC9F6, accessed: 26.07.2015). At this stage of the evaluation process, verification is based on analyses of submitted strategies and other associated documents. Regulations of KKK put a strong emphasis on the duration of strategic plans – they must cover a period of at least three years in advance. It must also be noted that this stage of formal evaluation is only a first of the three stages of the comprehensive evaluation process, and intended to provide preliminary data to be used for detailed assessment of strategic documents at later stages of the process.

After satisfying the formal requirements, the strategic documents (and the associated plans of activities) are subject to substantive evaluation. At this stage, the examination follows the guidelines expressed in the II section (Strategic Management under Submeasure 6: Cluster Development Strategy). At this stage, development plans are examined and the whole subsection is subject to expert evaluation. The experts concentrate on development plans for the next three years (i.e. for the duration of the formal KKK status award). The expert evaluation of strategic documents involves the examination of their feasibility, reliability, and of the aspirations expressed therein.

At this stage of the process, the procedure involves the use of the following indicators (http://www.pi.gov.pl/PARP/chapter\_86197.asp?soid=6701640B52A54EE3A5BCA9C-F2EADC9F6, accessed: 26.07.2015):

- Indicator 1. The quality of diagnoses. Evaluation the quality of the following: diagnosis of the current position of the cluster and its constituent entities, identification of fundamental problems and challenges, identification of key trends in the trade (in regional, national and global dimension).
- Indicator 2. Strategic objectives. Used to ascertain that the cluster under evaluation
  has properly defined their strategic objectives and suitable benchmarking instruments.
  The objectives need to be adequate to organisational needs, realistic, and capable of
  providing a significant increase of the economic potential, global competitiveness and
  innovative power of both the cluster and its constituent entities.
- Indicator 3. Feasibility of strategic objectives. Based on the evaluation of submitted documents expressing the intended approach to the realisation of strategic objectives, specifically the availability of human and material resources for their realisation, sources of financing, and the reliability and completeness of submitted plans for action.

The above indicators are measured on the scale of 0–5, with 0 representing failure to meet the criteria of evaluation, and 5 representing adequate fulfilment of the criterion in question.

A similar scale is used during the last stage of the evaluation process, i.e. the expert evaluation conducted in the form of an expert panel for the examination of the following

indicators(http://www.pi.gov.pl/PARP/chapter\_86197.asp?soid=6701640B52A54EE3A-5BCA9CF2EADC9F6, accessed: 26.07.2015):

- Indicator 1. The likelihood of meeting the cluster's strategic objectives, evaluated based on responses collected from cluster representatives on perceived potential to meet the indicated benchmarks of strategy realisation. This stage of evaluation is also based on the examination of past results and the cluster's performance (such as indices of growth dynamics).
- Indicator 2. The likelihood of gaining a competitive advantage on global markets,in terms of the cluster's potential to fully exploit the benefits offered by successful incorporation of strategic plans.
- Indicator 3. Adequacy of resources reserved for the realisation of strategic objectives (human, financial, infrastructural etc.).
- Indicator 4. Impact of the adopted strategy on cluster innovation, in the context of the correlation between the indicated strategic objectives and the cluster's innovative potential.
- Indicator 5. Barriers and challenges in the realisation of strategic objectives, as perceived by the cluster in their immediate business environment, and the cluster's potential to neutralise their effects.

The above indicators are only a subset of a much broader range of criteria used in the evaluation of clusters. In the context of management, they represent a self-contained package of benchmarking instruments for a multi-dimensional examination of the postulated strategic objectives and solutions. However, an important question comes to light in this context: is it viable and realistic to perform such in-depth analyses solely for the purpose of evaluating cluster performance in a narrow subsection of management? And does this approach offer any chance of credible evaluation to begin with?

On the one hand, such a formal evaluation is the indispensable element of the competition proceedings. After all, the status of a key national cluster, as a mark of competence, should be awarded by merit.

On the other hand, one may reasonably question the relevance of applying the same set of preliminary procedures to clusters with already established strategies, which are currently monitored and benchmarked on a regular basis? What are the chances for such evaluation system to remain consistent throughout the whole duration of the programme, if some of the actors are required to formulate new or separate strategic documents for the sole purpose of meeting the formal requirements of the KKK competition?

### CONCLUSIONS

The requirements formulated for clusters that apply for the status of a key national cluster are fairly steep and many cluster organisations will find them challenging, if at all possible in practice. The number of conditions to be met is truly overwhelming. This approach seems reasonable – after all, the KKK award is a mark of elite status, and the spectrum of available specialisations is quite limited, both in regional and national dimension. Consequently, the number of awards should not, and will surely be not too large. This conclusion can be corroborated by the results of the first edition of the KKK

programme, with only seven of the applying clusters recognised as fit to receive the formal status of a key national cluster. The list of awards includes (without limitation) such widely recognised Polish clusters as (http://www.pi.gov.pl/PARP/chapter\_86197.asp?so-id=6701640B52A54EE3A5BCA9CF2EADC9F6, accessed: 26.07.2015):

- Aviation Valley Cluster, represented by the Aviation Valley Association of Aerospace Producers:
- Interizon Cluster, represented by the Interizon Fund;
- Mazovian ICT Cluster, represented by the Association for Socio-Economic Development "Wiedza";
- West-Pomeranian Chemical Cluster "Zielona Chemia", represented by the "Zielona Chemia" Association.

In retrospection, the shift from purely quantitative to merit-based approach to cluster development policy is a step in the right direction. With strong emphasis on the quality, the KKK programme has good potential for identifying and recognising those cluster formations which offer the best value in terms of their ability to reach and maintain competitive advantage. The criteria of evaluation, expressed in formal requirements of the programme, seem suitable to provide effective identification of the most promising cluster structures which are truly deserving of the elite status of a key national cluster.

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# STRATEGIA ROZWOJU KLASTRA W KONTEKŚCIE KONKURSU "KRAJOWY KLASTER KLUCZOWY"

Streszczenie. Celem artykułu jest zaprezentowanie roli jaką pełni strategia rozwoju klastra w kontekście konkursu "Krajowy klaster kluczowy" (KKK). W myśl regulaminu na status takiego podmiotu zasługują tylko nieliczne klastry, które spełnią wiele wymogów kryteriów stawianych przed nimi na drodze konkursu oraz swoją działalnością wpisują się m.in. w specjalizacje regionu. W artykule zwrócono uwagę, że w walce o to miano istotną rolę pełni także obszar zarządzania. To właśnie wspomniana w tytule strategia rozwoju klastra podlega kilkuetapowej ocenie w trakcie trwania konkursu. Pierwszy etap jej oceny stanowi poziom formalny, następny jest merytoryczny, a ostatecznym elementem tego procesu jest ocena m.in. realności jej wykonania, ocena generowana przez panel ekspertów. Ponadto

w artykule zaprezentowano zmiany w podejściu do polityki klastrowej jakie dokonały się w polskim systemie wsparcia klastrów na przestrzeni ostatnich lat. Zmiany te były konieczne, ponieważ zauważalna była coraz mocniej tendencja stawiania na ilość klastrów, a nie na ich jakość i konkurencyjność.

Słowa kluczowe: strategia, klaster, krajowy klaster kluczowy

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