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Kyiv National University of Trade and Economics***MODERN IMPERATIVE IN CLUSTER MANAGEMENT****СУЧАСНІ ІМПЕРАТИВИ В УПРАВЛІННІ КЛАСТЕРАМИ****ANNOTATION**

The article examines approaches to the interpretation of the modern clusters essence. Author has given a distinction of the concepts of «cluster management» and «cluster governance». Identified key imperatives in cluster management, in particular identified economic etymology of the phenomenon of the cluster of excellence. The author substantiates the cyclical nature of non-linear processes of cluster structures management, in particular specifies restricting criteria of cluster excellence.

**Keywords:** cluster, cluster management, cluster governance, cluster excellence.

**АНОТАЦІЯ**

У статті досліджено підходи до трактування сутності сучасних кластерів. Проведено розмежування понять «кластерний менеджмент» та «управління кластером». Визначено основні імперативи в управлінні кластерами, зокрема ідентифіковано економічну етимологію феномену кластерної досконалості. Обґрунтовано циклічність нелінійних процесів управління кластерними структурами, зокрема визначення критеріїв граничної кластерної досконалості.

**Ключові слова:** кластер, кластерний менеджмент, управління кластером, кластерна досконалість.

**АННОТАЦИЯ**

В статье исследованы подходы к трактовке сущности современных кластеров. Проведено разграничение понятий «кластерный менеджмент» и «управление кластером». Определены основные императивы в управлении кластерами, в частности идентифицировано экономическую этимологию феномена кластерной совершенства. Обоснована цикличность нелинейных процессов управления кластерными структурами, в частности определено критерии предельного кластерного совершенства.

**Ключевые слова:** кластер, кластерный менеджмент, управление кластером, кластерное совершенство.

**Problem statement.** The organization of economic systems on the platform of the clusters is the key to sustainable development and growth. As a result, knowledge-intensive clusters play a key role in driving innovation, regional development and competitiveness. Current evidence suggests that in the presence of universities, research centers and supporting structures, a geographical concentration of high tech companies has a positive effect on the economic performance of those companies in a cluster. The ability of clusters to deliver high economic performance is often labeled as cluster excellence.

Cluster excellence can be expressed in terms of cluster growth, added value, productivity and innovativeness. Is quite obvious strong European and Western Atlantic economy under the influence of modern globalization shocks actively transform cluster management towards cluster excellence. Hence the clusters take on new forms and characteristics that in some way differ from classical interpretations, so the study case is actually infinite.

Therefore, there is no doubt that cluster excellence matters, and the main questions of scholars and practitioners refer to the ways of achieving it. One of the factors that is seen as essential for achieving cluster excellence refers to high quality cluster management or even cluster governance.

**Analysis of recent researches and publications.** Many scientific papers are devoted to problems of defining the essence of modern clusters and principles of cluster management. In particular there are several definitions of a cluster coexisting as well as several applications to different socio-economic contexts, stressing one or more of the particular features of cluster. The concept of cluster can be considered as a puzzle made of different pieces and elaborated from the original literature of clusters or borrowed from other fields of study [6].

Research of contemporary sources shows that contrary to new approaches to determination of clusters and cluster management they are all based on the Porter's theory. Porter's cluster model and the innovative approach were drawn back in the research by Schiele H. [1]. The main aim of the paper is to explore the implications of sectorial agglomerations – clusters – for the strategic management of firms. The author also notes that it is necessary to consider any company's entire value-creating system from a geographical point of view.

Connell J., Kriz A., Thorpe M. [2] claim that cluster management is very important and it can give positive results from member firm collaboration, knowledge sharing and innovation if these are appropriately exploited. Such an outcome was found by employing case study together with community based participatory research and interviews within four industry clusters. Knowledge sharing and innovation exchange was examined by using top-down, hybrid and bottom-up clustering from a variety of sectors.

Porter's economic cluster theory is discussed by Patti A. [3]. The paper aims at illustrating the advantages for firms who build local supplier and customer relationships whenever possible. The article seeks to support Porter's economic cluster theory by providing empirical evidence. The research has helped to prove that despite the age of the global business environment, building local supply chains is still of value. In the research paper authors examine how the institutional context of a country can inhibit entrepreneurial activity in clusters

Andersen P., Bollingtoft A. [4], using case study to get the desired result, aims at getting information on how globalization affects cluster-based firm's use of local knowledge resources and the combination of local and global knowledge. Qualitative case studies of nine firms in three clusters were chosen to be made. The clusters that are strongly affected by increasing global division of labour are furniture, textile and clothing and IT. The study is made in a small and mature economy and the paper takes a micro-oriented perspective.

Another exploratory study is made by three authors Florence C., Karine G., François S.. The authors aim at better understanding how a socio-economic proximity can be organized and investigates the role of third parties in this process.

An empirical analysis was adapted by Giuliani E. [5] to analyse the relationship between different kinds of networking and the performance of firms in industry clusters. Two wine clusters in Chile and Italy were chosen to study the importance of local embeddedness and external openness for product success. The case analysis of two wine clusters showed how network influence the performance of firms.

The extant cluster literature was the source helping to identify potentially strategic cluster resources in the article [6]. The paper suggests a means for resource value assessment through the mediating role of a value creation system. It is worth noting that the typology was tested in one cluster, further empirical validation is needed in different clusters for assessing its inter-cluster validity.

Colovic A., Lamotte O. [7] examined four international new ventures in two clusters in France. Semi-structured interviews were conducted with CEOs and other representatives of the international new ventures and the members of the cluster management teams. The study has shown that internationalization can be facilitated by providing resources, networking opportunities and legitimacy to help them reach global markets by the clusters.

Clusters as the field research methodology for theory testing and refinement was chosen in the article [6]. The authors aim at presenting and discussing a conceptual model for performance measurement and management of a cluster based on the concepts of the Balanced Scorecard and other models. Research has shown that the model adequately captures the perspectives of performance management of a cluster, emphasizing the importance of measuring leading and lagging dimensions of performance such as collective efficiency and economic/social results.

Unfortunately in Ukraine the empirical study of clusters is carried out due to lack of funding. Despite this, many domestic scientists are studying problem of clustering and cluster management. Among them are Mazaraki A. [8], Pyatnitska G. [9] and Fedulova L. [10].

Unsolved parts of problem. Being an increasingly popular topic, clusters and cluster management are strongly criticized by some authors as

it is indistinct, lacking unique definition and has problems related to its measurability. The feature of being indistinct might be supported by the evolutionary nature of a cluster concept. That is why we want to explore cluster management and to enrich its categorical apparatus. We also suggest that the notion of cluster governance needs to be brought onto the stage and cluster governance.

**The purpose of article.** The aim is to examine the nature of key imperatives in cluster management in particular the cluster management excellence as a process rather than an output and cluster governance as an important part of this process.

**Results of research.** Cluster management can be defined as the organisation and coordination of the activities of a cluster in accordance with certain strategy, in order to achieve clearly defined objectives. Cluster management represents a continuous activity of a cyclical nature. It is a complex, interactive and non-linear process. The main stages of the cluster management cycle can be split into define; design; implement, monitor, evaluate and revise [11].

Cluster management goes beyond management of an individual organisation. It implies mediating and facilitating the relationships of multiple cluster members. Each of the cluster members has own agenda, and a key challenge for cluster managers is to make sure those agendas are united into common objectives and collective actions, that conflicting interests are resolved, and the relevant organisations see enough added value from their participation in cluster activities.

Cluster management excellence is often linked to the strength and professionalism of the cluster organisation. By a cluster organisation one should understand organized efforts to facilitate cluster development, which can take various forms, ranging from non-profit associations, through public agencies to companies. A cluster organisation typically functions as a mediator between various cluster members and adds value by stimulating collaboration both within the cluster and between the cluster and the outside world.

Cluster management excellence thus refers to the organized efforts allowing achieving and maintaining cluster excellence. The term and the notion of "cluster management excellence" are increasingly gaining popularity. Labeling excellent cluster managers becomes common practice at both the European and national levels. Cluster organisations seek for ways to demonstrate excellence towards their members, policy makers and the community. Policy makers, in turn, launch a number of projects and initiatives aiming to improve the efficiency of existing efforts in cluster management.

The key pillars of excellence in cluster management include a regular review of both cluster objectives and the objectives of the cluster organisation, 'trying out' various types of actions and learning from the results of those actions, as well as constant monitoring and regular evaluation,

adaptive performance measurement systems and active engagement of cluster stakeholders at all stages of the management cycle.

The current discussions on cluster management excellence primarily focus on the outputs related to clusters and cluster organisations. In this report, we support the notion of cluster management excellence given by Jansen W., Schaffmeister B. [11]. They interpret cluster management excellence as a process rather than an output and suggest that excellence in outputs derives from excellence in the process, and therefore specific attention needs to be paid to how the cluster management process should be organized.

We believe that focusing on cluster management alone is not enough for cluster excellence, and that the notion of cluster governance has to be brought the scientific circulation. Cluster governance refers to the intended collective actions of cluster stakeholders to advance the cluster and develop a sustainable competitive advantage.

Cluster governance thus represents the interests of cluster stakeholders (universities and research institutes, large and small companies, government, supporting structures), while cluster managers strive to serve the needs of cluster stakeholders. Cluster management addresses day-to-day cluster activities such as planning, allocation of human and financial resources, monitoring cluster progress etc. Governance, in turn, among others refers to appointing cluster managers and evaluating their performance, setting the vision and strategy of the cluster and approving action plans.

Let's consider the features of cluster governance for a better understanding of differences from cluster management (fig. 1).

Cluster governance is about the formalization of relationships among cluster members, and it is not immediately present once the cluster is established. In the beginning of the cluster's life-cycle, the need for cluster governance may not always be obvious for all cluster participants. One of the key prerequisites for cluster participants to consider the issues of cluster governance refers to a strong external pressure of (foreign) competition. Without such common external threat, it often becomes highly challenging to convince cluster participants that there is a need for cluster governance [11].

We also, would like to note that cluster governance is very important for development of the business inclusiveness concept. This is particularly true for Ukraine. Inclusiveness in cluster governance implies equal participation, equal treatment and equal rights of cluster members. It means that all stakeholders have the right to meaningfully participate in governance processes of the cluster and influence decisions that affect them.

**Conclusions.** Cluster managers operate in a turbulent, uncertain and highly complex environment. The key uncertainties, among others, are related to the continuity of commitment of the key stakeholders, financial instability, and changes in technological and regulatory fields, external competition and market developments. To survive in such unpredictable environment, cluster governance is needed as a more extensive form of cooperation. We also are able to conclude that there is no optimal recipe for imperative in cluster management. Not only do different clusters require different approaches, but even the same cluster is likely to require new approaches as it passes through various stages of its development, or in response to various external drivers.

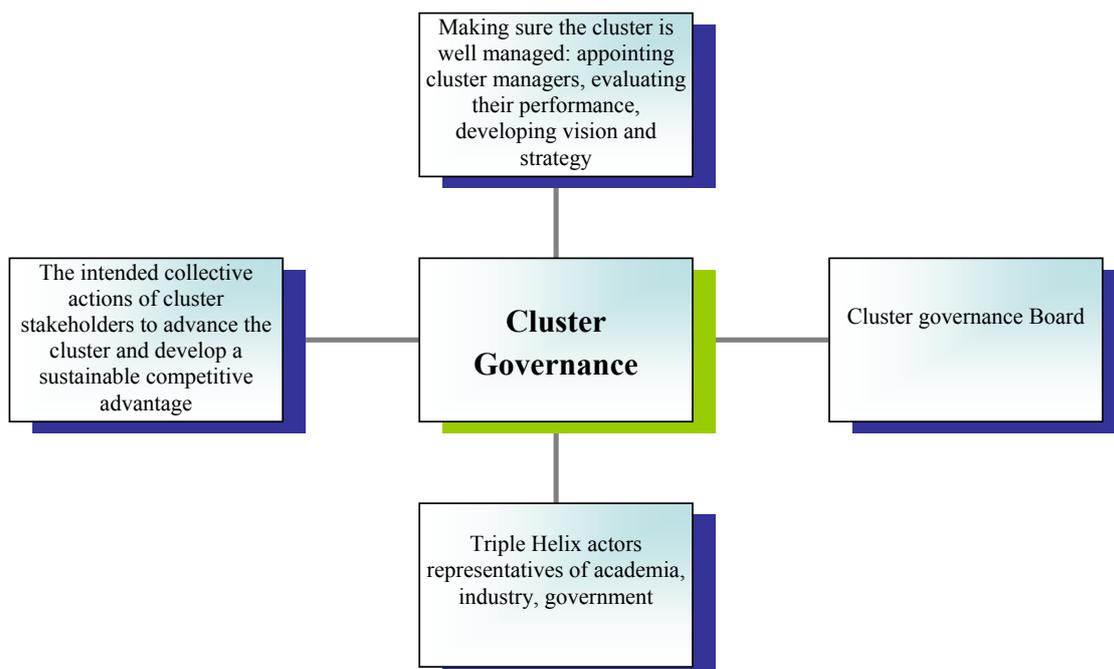


Fig. 1. Features of Cluster Governance

Source: adapted by the author from

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