

CLUSTERING OF BUSINESSES IN THE REPUBLIC OF MOLDOVA: ANALYSIS OF ECONOMIC DEVELOPMENT PROSPECTS

IRINA CĂLUGĂREANU

Doctor Habilitat, Associate Professor

Academy of Economic Studies of Moldova

calugareanu.irina@ase.md

ORCID:0000-0002-1388-4875

Abstract: In the context of the National Industrial Development Program for the years 2024-2028, supporting the cluster development in the industrial sector of the Republic of Moldova, represents a priority strategic direction for strengthening business infrastructure. Clustering, broadly conceptualized as a geographical concentration of companies and innovation activities, has become essential for increasing economic competitiveness on a regional scale. In the Republic of Moldova, this process is seen as an essential way to increase the operational efficiency of companies by facilitating access to common resources such as advanced technology, know-how and specialized infrastructure. Clustering allows small and medium-sized enterprises to strengthen their internal capabilities and to collaborate with other entities in the same sector and in associative sectors, leading to increased innovation and optimization of production processes. This article focuses on the opportunities for financing and developing business clusters in the Republic of Moldova, highlighting the role of government support, international organizations and the readiness of entrepreneurs to collaborate in order to create an enabling environment for innovation and sustainable economic growth. It also analyzes the impact of this initiative on the competitiveness and performance of the key regions of the Republic of Moldova. Finally, it is emphasized that the success of this initiative depends on effective collaboration between the public, private and academic sectors and adaptability to the dynamics of international markets.

Keywords: business, clustering, financeing, competitive advantage, competitive advantage, management, strategies

JEL Classification: O1, M1, M2.

Introduction

In conditions of global turbulence, the business clustering approach, which is a new model with a history of development in the EU, contributes to the creation of a system of functional interaction between education, science, business and public administration. The cluster approach is relatively a new management technology that improves the competitiveness of industry, the region and the country's economy as a whole. Thus, organizations and companies are integrated into the cluster, interacting with each other according to the geographic principle and organizing their activities in a specific area.

Because it promotes collaboration between different institutional and economic groups, business clustering is an important approach for the Republic of Moldova's economic development. Drawing from insights gained through author's involvement in cluster development projects, it has been demonstrated that this approach significantly fosters innovation, enhances industry competitiveness, and supports sustainable economic growth. The establishment of clusters enables SMEs in the Republic of Moldova to adopt an advanced regional economic framework, contributing to long-term development objectives.

Its primary goals are to improve energy efficiency, green production methods, and the added value of goods and services while also adapting to the community's social needs. Opportunities for the effective use of resources like energy, infrastructure, forestry, and water will be created by such an economy, improving the region's general (Iordachi et al., 2018).

The Republic of Moldova has implemented the clustering model, drawing inspiration from European Union practices, where this concept has demonstrated a significant impact on regional development and economic competitiveness. This model has been transposed into the national context through public policy instruments and legislative initiatives aimed at stimulating cooperation between economic actors and strengthening their innovation capacity, as detailed below.

Results

The European Union, together with the Government of the Republic of Moldova, is supporting the development of clusters through measures focused on the diversification and expansion of strategic industries. These actions facilitate the strengthening of the SME sector and boost sustainable growth, contributing to the country's economic progress. Priority areas for the development of clusters and their formation have been determined in earlier program documents:

1. Innovation Strategy of the Republic of Moldova for 2013-2020 "Innovation for Competitiveness" (Government of the Republic of Moldova, 2013a).
2. Roadmap for improving Moldova's competitiveness (Government of the Republic of Moldova, 2014).
3. The concept of cluster development in the industrial sector of the Republic of Moldova (Government of the Republic of Moldova, 2013b).
4. National Development Strategy "European Moldova 2030 (Government of the Republic of Moldova, 2024).
5. National Industrial Development Program for 2024 - 2028 (National Industrial Development Program, 2024).

Numerous researches, both from local and international sources, emphasize that one of the most effective tools to support the development of the eco-economy in the Republic of Moldova is the promotion of business clusters. This model contributes significantly to stimulating collaboration, innovation and competitiveness among economic actors. According to the model of cluster development in the industrial sector of the Republic of Moldova (Government of the Republic of Moldova, 2014), the following main factors negatively influence business growth in the country: SMEs and large enterprises have a low level of association.

- Innovations are not fully integrated into the real economy due to a lack of cooperation between companies and research and innovation institutions, which affects how well they meet the demands of the productive sector (Government of the Republic of Moldova, 2014).
- Businesses find it challenging to offer competent people when corporations and educational institutions do not effectively cooperate.
- Effective resolution of significant common issues is hampered by poor communication in the workplace, which is brought on by a lack of trust between internal and external partners.
- Underdeveloped partnerships between local authorities and businesses hinder the effectiveness of collaboration and make collaborative efforts challenging to execute.

- Insufficient personal funds, no funding from budgetary sources, and exorbitant interest rates on loans limit development (Government of the Republic of Moldova, 2014).

Assuming what has already expressed, the establishment of cluster positions and activities at the level of government policy requires the following ministries, as shown in Table 1.

Table 1. Institutions involved and responsibilities in the cluster development process

Institution	Responsibilities
Ministry of Economic Development and Digitization	Main actor responsible for developing and coordinating general policies in the field of entrepreneurship, with a focus on SME and cluster development.
Minister for Agriculture and Food Industry	Responsible for designing and implementing development strategies in agriculture and food industry.
Minister for Infrastructure and Regional Development	Responsible for developing and implementing regional policies and coordinating the infrastructure needed to support them.
Ministry of Culture	Policy Development Officer for Culture and Tourism
Other ministries	Policy-makers complementary to business environment development and cluster policy implementation, with various responsibilities and tasks
Organization for Entrepreneurship Development	Support cluster initiatives at all formative stages, providing advisory, training and financial support for the development of MSMEs and clusters
Investment Attractiveness Agency	Promoting the brands of clusters and local companies, attracting investors for development
Institute of Economics, Finance and Statistics	Scientific-methodological support in cluster policy design and development
National Agency for Research and Development	Support and promote the innovative and sustainable development of clusters to boost competitiveness and long-term economic growth.
Universities, higher education and dual education institutions	Special research and training of professionals according to market and cluster members' requirements
Regional Development Agencies	Networking with the business community and implementing regional development policy
Chambers of commerce and industry, industry associations, business incubators	Facilitate and support business relations and actively promote the concept of clustering with a view to creating strategic partnerships and increasing market competitiveness.

Source: systematized by author

In the context of policies and interventions to support clusters, a very important aspect to consider is the institutionalization of clusters.

Institutionalized organization, which includes a dedicated management entity, is the most advanced form of cluster structuring, offering multiple benefits for increasing the efficiency of collaboration among key actors and strengthening their competitive advantages. However, this type of organization is only feasible in mature and well-dimensioned clusters with sufficiently strong key actors able to manage and support dedicated management entities.

The cluster management entity is the organization designated by the cluster members to represent them in relations with third parties. In general, there are three major possible forms of institutionalized cluster organization based on cluster initiating entities:

- **Industry Driven** - when the management entity is represented by an association of enterprises (Producers' Association, Cooperative, Export Consortia, etc.). It is considered to be the most efficient form of institutional organization of cluster management, as its strategic and operational objectives are dictated directly by the firms in the sector. In Romania, examples can be Romanian Textile Concept (2024) or Pro Wood (2024).
- **Research Driven** - when the managing entity is a university or research institute. This type of managerial organization has a strong advantage in terms of innovation, but it is less efficient than the first one, as it requires a considerable effort to harmonize the R&D-innovation offer with the real needs of business. In Romania, an example is the *Indagro Pol* cluster (<http://www.inma.ro/indagropol/>), run by the National Research and Development Institute for Agricultural and Food Industry Machinery and Installations (Indagro Pol, 2024).
- **State Driven** - when the managing entity is a local or regional public authority (regional development agency, local/regional public administration, etc.). Although it has the advantage of direct financial support from the state, it is the most vulnerable type of cluster in terms of sustainability, risking extinction as public support diminishes or ceases. This type is widespread in Europe. For example, all clusters in Lower Austria are clusters of this type, managed by the Regional Development Agency of the respective Land (Ecoplus Austria, 2024). In Romania, examples are *Imago Mol* (2024), run by the North East Regional Development Agency or *Euronest* (2024), run by the Iasi County Council.

A cluster's organizational structure plays an important role since it provides its binding nature and ensures that its members are transparent and accountable through its formal organization and collaboration standards.

According to the author, this in turn forms the foundation for beneficial trust, which is the basis of productive collaboration. The cluster's organizational structures additionally encompass management responsibilities and member benefits. This promotes an aspect of cluster "corporate identity" to grow, which has an important impact on a cluster management's competitiveness and dynamism.

The core elements of the organizational structure of cluster management are (Iordachi et al., 2018):

- Legal position, or legal form
- The cluster's structural hierarchy, authority, capacities, and routes of communication (who is in charge of what?)
- Principles, rules, activities, classification, managerial tools and procedures, the entirety of relationships, and the organization of operations are examples of these systems.

A cluster management's organizational structure must meet a variety of the requirements, including having a large number of partners, fostering cooperative relationships, having a simple hierarchy with as few levels as feasible, and being open and functional. Within the cluster the organizational structure

requires the support of all members for obtaining and mobilizing resources quickly without being an overwhelming burden for resource providers or individual members. Cluster management also requires the flexibility to respond to market demands. With today's markets being so globalized and competitive, the cluster management structure needs to be able to respond quickly to a variety of demands (rapid reaction capabilities). This specific task is carried out by cluster management that has a strong market focus. The cluster management organizational structure must be open and integrative enough to guarantee steady and high-quality collaboration, but it must also be exclusive and selective enough to incorporate a wide range of partners and capable actors.

Meanwhile, there are competing forces affecting the cluster management organizational structure. Accordingly, only specially designed organizational structures with sufficient human resources—which are required for cluster operation—can offer the multifunctionality of cluster management (European Commission, 2024).

The phase of selecting the organizational and legal form, which is depending upon the cluster's goals, is an important part of the cluster management organizational structure. Generally speaking, clusters whose primary objective is the cooperation execution of business operations need various organizational and legal structures, based on the group.

The expression "structure follows strategy" applies in this situation. According to the author, some potential legal structures for cluster administration are (Federation of American Scientists, 2024):

- Non-profit or for-profit associations;
- Limited liability companies (LLCs);
- Public limited companies (SAs);
- Hybrid forms (a combination of limited liability companies and partnerships);
- Foundation

The second element of the cluster management organizational structure is the stage of structural hierarchy, powers, competences and communication channels, which determine the competence of communication, i.e. who in the cluster is responsible for the information and messages flowing between departments and cluster members. Since divisions and subdivisions have shown their usefulness in practice, the following traditional components of cluster management organizational structure are still used today: working groups, the executive board, the advisory council, and the cluster manager.

According to the author, the regulations adopted by the members of the clusters establish the objectives of the organization, the conditions of membership, the rights and responsibilities of the members, as well as the management structure and its tasks. Specific operational activities are carried out in working groups, each with responsibility for distinct profiles within the various clusters. Depending on the level of organization and aggregation, primary and secondary processes can be identified in these profiles.

The Republic of Moldova has initiated the development of clusters in various fields such as technology, services and agriculture, with the main objective of stimulating collaboration and increasing economic competitiveness. Although it is at an early stage of implementation of these practices, valuable experiences have already been accumulated, which can be analyzed and integrated into future strategies to maximize the impact on economic development

In the Republic of Moldova, clustering holds great promise for the future, fostering both improved integration into global markets and economic growth. To realize this potential, it is essential to

continue government support and adapt legislation to improve the conditions for clusters to operate. To guarantee the transfer of knowledge and technology required for innovation and sustainable development, it is also imperative to promote improved cooperation between universities, businesses, and governmental agencies.

Therefore, the EU4Moldova: Focal-Regions Programme, which is implemented by UNDP and UNICEF and supported by the European Union, promotes intelligent, inclusive, and sustainable socioeconomic development in the Cahul and Ungheni region. By encouraging business collaboration and the creation of creative projects within clusters, this program seeks to raise living standards and make the Cahul and Ungheni regions more appealing to potential investors (UNDP, 2024a). Eight non-commercial organizations in the Cahul and Ungheni regions—five of which are in the Cahul region—have received funds totaling €800,000 from the initiative, which has a €23 million overall budget. The purpose of these grants, which were given out as LVGAs (Low Value Grant Agreements), was to help clusters grow and create new jobs by funding the acquisition of goods, services, equipment, and labor.

The clusters, recognized as catalysts for innovation and regional development, were selected through a competitive call for proposals, each receiving a grant of €100,000 per project, subject to an own contribution of at least 10% of the total project value. This approach not only stimulates economic development but also ensures the long-term sustainability of the projects by involving the beneficiaries in co-financing. At the same time, their active involvement in the implementation process contributes to stronger commitment and more efficient management of resources.

Thus, the clusters Zootechnics of Bacia Sudului, Winemaking, Beekeeping, Table Grapes, Tourism of the Magurian Hills, Tourism VIA Cahul, Furniture and Bacifer received funding through the EU4Moldova: Focal-Regions Programme, implemented by UNDP and UNICEF (UNDP, 2024b). This financial support contributed significantly to modernizing infrastructure, increasing production capacity and improving competitiveness both locally and internationally. The funding has also had a direct impact on the development of human capital by creating new jobs and supporting innovation, thus strengthening the positioning of clusters on the global market and attracting new strategic partnerships.

Table 2. Impact of UNDP funding on Clusters in key regions Cahul and Ungheni

Cluster	Jobs created	New products	Modernized infrastructure	International collaborations	Trainings	Event participations
Bacifer	6	2	100kW PV photovoltaic power plant	1	9	6
Furniture	17	10	New machinery	4	10	4
South Bacia Zootechnic	3	2	Mobile modern slaughterhouse	1	10	6
Winemaking Cahul	3	1	Wine Center	1	10	5
Beekeeping Cahul	6	1	Packaging line with Easy Snap technology	2	10	5

Table Grapes Cahul	5	2	Sorting and packing hall, electronic automobile scales, equipment	1	10	6
The tourist area	7	7	Tourist equipment, tourist trails, road signs	1	12	6
Tourist VIA Cahul	13	7	Belvedere platform, Tourist equipment, tourist signposts	5	10	9

Source: Author

The non-reimbursable assistance provided in the form of project grants aimed to promote the spirit of cooperation and partnership between companies in urban and rural areas and to support innovative ideas. The aim was not only to achieve immediate economic growth, but also to establish a solid basis for long-term development by integrating value chains and encouraging investment.

The eight clusters in the Cahul and Ungheni Region analyzed have demonstrated that their success depends to a large extent on the close cooperation between their members and the international partnerships developed. Job creation, the launch of new products and the modernization of infrastructure were made possible thanks to effective collaboration between companies, facilitating access to resources and expertise. The "Furniture" and "Tourist VIA Cahul" clusters have excelled through international partnerships and the implementation of joint projects.

Faced with challenges related to communication and resistance to change, cooperation between members and the constant support of the management team led to the correction of problems and rapid implementation of solutions. This collaboration has brought mutual benefits, accelerating progress and the achievement of objectives.

In the author's view, by fostering collaboration and innovation, UNDP and the EU4Moldova: Focal-Regions Programme reaffirm their dedication to advancing regional economic development through the promotion of company clusterization in the Republic of Moldova. These initiatives aim to create clusters as strategic tools to enhance the competitiveness of regional sectors and emphasize the importance of cooperation between various institutional and economic entities. In addition to stimulating economic growth in the short term, these programs contribute to the foundation of integrated, sustainable and long-term development in the Cahul and Ungheni regions, but also in other parts of the country, by providing financial resources, technical assistance and encouraging cross-sectoral partnerships.

Conclusions

By focusing on key economic sectors, the clusters in the Cahul and Ungheni regions highlight the strategic importance of regional economic development. Each cluster is designed to capitalize on the comparative advantages of the region, introducing modern technologies, innovative practices and continuous training for its members. These initiatives aim not only to increase local competitiveness and access to international markets, but also to stimulate job creation and promote sustainable development. The implementation of these clusters is supported by close partnerships with international organizations, which provide not only the necessary funding, but also the expertise and technical support needed to achieve the ambitious goals. This model of cooperation between local entities, government authorities and international partners is essential to ensure a positive and long-lasting impact in the region. Thus, the clustering projects in Cahul and Ungheni demonstrate how well-planned and efficiently managed strategies can transform a region's natural and human potential into engines of economic growth and innovation, bringing widespread benefits to local communities and contributing to Moldova's socio-economic progress.

United Nations Development Program and initiatives such as EU4Moldova: Focal-Regions, play an important role in the Republic of Moldova, reflecting strong and sustainable cooperation between UNDP, the European Union, local governments and various international and national organizations. This collaboration is essential for promoting sustainable socio-economic development, improving governance, combating climate change, and increasing social inclusion in key regions of Moldova. Efforts combining financial resources and technical expertise from different entities contribute to achieving the goals of sustainable development and improving the quality of life for Moldovan citizens.

As an important aspect of the UNDP and EU4Moldova: Focal-Regions Programme is the focus on empowerment and active participation of local communities in decision-making processes. By stimulating inclusive economic growth, improving access to quality public services and promoting transparent and accountable governance policies, the programs not only support local development, but also strengthen local capacities to manage and implement sustainable change. Citizens thus become active partners in the socio-economic transformation of their regions, contributing to a more cohesive and resilient Moldova.

Note: The article was elaborated within the framework of Subprogram 030101 "Strengthening the resilience, competitiveness and sustainability of the Moldovan economy in the context of the EU accession process", institutional funding.

References:

1. *Cluster collaboration and business support tools to facilitate entrepreneurship, crosssectoral collaboration and growth*. Available at: <https://ec.europa.eu/docsroom/documents/9972/attachments/1/translations/en/renditions/native> (Accessed September 10, 2024).
2. *Cluster development is the new economic development*. Available at: <https://fas.org/publication/cluster-development-is-the-new-economic-development/> (Accessed August 25, 2024).
3. ECOPLUS AUSTRIA. *Ecoplus Cluster*. Available at: <https://www.ecoplus.at/en/ecoplus/cluster> (Accessed September 3, 2024).
4. EURONEST. *Clustereuronest*. Available at: <http://clustereuronest.ro/ro/> (Accessed September 3, 2024).
5. Government of the Republic of Moldova (2013a). *Decision of the Government of the Republic of Moldova No. 952 of November 27, 2013 on the approval of the Innovation Strategy of the Republic of Moldova for 2013-2020 "Innovations for Competitiveness"*. *Official Monitor of the Republic of Moldova*, 284-289.

6. Government of the Republic of Moldova (2013b). *Decision of the Government of the Republic of Moldova No. 614 of 20-08-2013 on the concept of cluster development of the industrial sector of the Republic of Moldova. Official Gazette of the Republic of Moldova*, 187-190.
7. Government of the Republic of Moldova (2014). *4 of January 14, 2014 on the approval of the Roadmap for improving the competitiveness of the Republic of Moldova. Official Monitor of the Republic of Moldova*, 17-23.
8. IMAGO MOL. *Imago Mol*. Available at: <http://www.imago-mol.ro/?lang=ro> (Accessed September 3, 2024).
9. INDAGRO POL. *Indagropol*. Available at: <http://www.inma.ro/indagropol/> (Accessed September 3, 2024).
10. Iordachi, V., et al. (2018) *Creating and organizing clusters in the Republic of Moldova: Methodological guide*. Chisinau: INCE.
11. *National Development Strategy "European Moldova 2030"*. [online]. Available: <https://gov.md/ro/moldova2030> [Accessed: September 28, 2024].
12. *National Industrial Development Program for 2024-2028*. Available at: https://gov.md/sites/default/files/document/attachments/mded_nu-71.pdf (Accessed September 5, 2024).
13. PRO WOOD. (no date). *Prowood*. Available at: <http://www.prowood.ro/> (Accessed September 2024).
14. ROMANIAN TEXTILE CONCEPT. *Romanian Textile Concept*. Available at: <http://www.romanian-textile.ro/> (Accessed September 6, 2024).
15. UNDP (2024 a). *UNDP Open Data*. Available at: <https://open.undp.org/> (Accessed September 28, 2024).
16. United Nations Development Programme (2024b). *Cahul and Ungheni: Aspiring smart cities with the support of the EU and UNDP Moldova*. Available at: <https://www.undp.org/moldova/press-releases/cahul-and-ungheni-aspiring-smart-cities-support-eu-and-undp-moldova>. (Accessed August 29 2024).