

УДК 332.1

Pulina Tetiana¹, Yaroslav Maliarenko²

¹doc. of Econom., prof. NU «Zaporizhzhia Polytechnic»

²PhD-student NU «Zaporizhzhia Polytechnic»

CLUSTERS IN MANUFACTURING

Cluster development has emerged as a key strategy for promoting regional economic growth and competitiveness. A cluster is a geographically proximate group of firms, suppliers, and other related organizations that share common markets, technologies, and skills [4]. Clusters are particularly important in manufacturing, where they can promote innovation, productivity, and

competitiveness. Manufacturing clusters can bring together firms from different stages of the value chain, including suppliers, manufacturers, and distributors, to create a dynamic and innovative ecosystem. By sharing knowledge and resources, firms within a cluster can increase efficiency and reduce costs, making them more competitive in the global marketplace.

One of the primary benefits of clusters in manufacturing is increased innovation. By bringing together firms with different areas of expertise, clusters can facilitate the exchange of knowledge and ideas, leading to the development of new products and processes. Additionally, clusters can help to attract investment and talent to the region, creating a virtuous cycle of growth and innovation.

There are many examples of successful manufacturing clusters in the world. Here are just a few examples.

USA [3; 4]:

1. Silicon Valley cluster in California. It is home to numerous high-tech firms, including Apple, Google, and Intel, as well as many smaller start-ups.

2. Automotive cluster in Michigan – home to many of the world's largest automotive companies, including General Motors, Ford, and Chrysler.

3. Aerospace cluster in Washington state. Washington is home to Boeing, one of the largest aerospace companies in the world, as well as many smaller aerospace firms.

4. Biotech cluster in Massachusetts. Massachusetts is home to many biotech firms, including Biogen and Genzyme, as well as many academic and research institutions.

5. Furniture cluster in North Carolina. North Carolina is home to many furniture manufacturers, including Ashley Furniture and Broyhill.

China [2]:

1. Electronics cluster in Shenzhen. Shenzhen is home to many electronics firms, including Huawei, ZTE, and Tencent.

2. Automotive cluster in Chongqing where many of the world's largest automotive companies operate, including Ford, General Motors, and Volkswagen.

3. Textile cluster in Jiangsu province – Hengli Group and Shenghong Group.

4. Steel cluster in Hebei province. Hebei is home to many of China's largest steel firms, including Baosteel and Wuhan Iron and Steel.

5. Food processing cluster in Shandong province where many food processing firms operate, including Yili Group and Bright Food.

Ukraine (before February, 2022) [1; 5]:

1. IT cluster in Lviv. It is one of the most successful manufacturing clusters in Ukraine. Lviv is home to many IT firms, including N-iX and SoftServe.

2. Agricultural cluster in Kherson. Kherson is home to many agricultural firms, including Kernel and MHP.

3. Aerospace cluster in Kyiv. Kyiv is home to many aerospace firms, including Antonov and Motor Sich.

4. Footwear cluster in Lviv. Lviv is also home to many footwear firms, including Ecco and Geox.

5. Metalworking cluster in Dnipropetrovsk. Dnipropetrovsk is home to many metalworking firms, including Interpipe and Metinvest.

However, cluster development also presents significant challenges. One of the primary challenges is ensuring that the benefits of cluster development are shared equitably across the region. For example, some firms within a cluster may benefit more from knowledge spillovers and access to resources than others, creating a situation of uneven development within the cluster. Additionally, clusters may also face challenges related to the availability of skilled labor and access to financing.

To promote the development of clusters in manufacturing, there are several measures that can be taken [4].

Firstly, governments can invest in infrastructure and technology to create an environment that is conducive to cluster development. This can include providing access to high-speed internet and promoting the development of research and development facilities.

Secondly, governments can provide tax incentives and other forms of support to firms within clusters, particularly those that are in the early stages of development.

Thirdly, businesses and non-governmental organizations can work to develop partnerships and networks within the cluster to promote collaboration and knowledge sharing. This can include developing joint research projects, hosting industry events, and providing training and support for firms within the cluster.

But it is important to recognize that cluster development is a long-term process that requires sustained effort and investment. Cluster development initiatives should be designed with a view to promoting long-term growth and sustainability, rather than short-term gains.

In conclusion, cluster development has emerged as a key strategy for promoting regional economic growth and competitiveness, particularly in manufacturing. By promoting innovation, productivity, and competitiveness, clusters can create a virtuous cycle of growth and development. However, cluster development also presents significant challenges, and efforts must be made to ensure that the benefits of cluster development are shared equitably across the region. Through government investment, business and NGO initiatives, and sustained effort, we can work to promote the development of clusters in manufacturing and create an environment that is conducive to long-term growth and development.

LITERATURE

1. Ємцев В.І. Кластери як сучасна форма квазіінтеграції на мезорівні. URL: <https://dspace.nuft.edu.ua/jspui/bitstream/123456789/9142/1/3.pdf>
2. Anna Puglisi, Daniel Chou. China's Industrial Clusters: Building AI-Driven Bio-Discovery Capacity. URL: <https://cset.georgetown.edu/wp-content/uploads/Chinas-Industrial-Clusters.pdf>
3. Mapped: North America Top Advanced Manufacturing Clusters. URL: <https://www.waterlooodc.ca/blog/mapped-north-america-top-advanced-manufacturing-clusters>
4. Mercedes Delgado, Michael E. Porter, Scott Stern. Defining Clusters of Related Industries. URL: https://clustermapping.us/sites/default/files/files/resource/Defining%20Clusters%20of%20Related%20Industries%20-%20NBER%20Working%20Paper%2020375_0.pdf
5. Top Ukrainian IT Clusters. URL: <https://ucluster.org/en/school-of-startups/top-ukrainian-it-clusters/>