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Contents

INTRODUCTION	5
KOSTIUCHENKO L.V. PhD in Economics, Associate Professor, Associate Professor of logistics Department of National Aviation University (Ukraine), MARCHUK V.Ye Doctor of Engineering, Associate Professor, Professor of Logistics Department National Aviation University (Ukraine), HARMASH O.M. , PhD of Economics, Associate Professor, Associate Professor of Logistics Department of National Aviation University (Ukraine) <i>LOGISTICS CLUSTER AS A WAY OF IMPLEMENTING A MULTISOURCING MODEL TO ENSURE THE LIVELIHOOD OF THE LOCAL COMMUNITY</i>	6 – 14
BUGAYKO D.O. PhD in Economics, Associate Professor, Vice - Director of International Cooperation and Education Institute, Instructor of ICAO Institute, Associate Professor of Logistics Dept. National Aviation University (Ukraine), IERKOVSKA Y.M. Lawyer (Ukraine), ALIYEV F.F. Chairman of the Board, State Inspectorate on the Flight Safety in Civil Aviation of the Republic of Azerbaijan (Azerbaijan), BUGAYKO D.D. Student of Logistics Dept. National Aviation University (Ukraine) <i>MODERN CHALLENGES OF AIR TRANSPORT: SAFETY, REGULATIONS, OPERATIONS AND INFRASTRUCTURE</i>	15 – 28
SAVCHENKO L.V. PhD of Technical Sciences, Associate Professor, Associate Professor of Logistics Department of National Aviation University (Ukraine), <i>RELATIONSHIP BETWEEN TRANSPORT INFRASTRUCTURE EXPENDITURES AND COSTS AND TRANSPORT INDICATORS - AN OVERVIEW OF EUROPEAN AND UKRAINIAN SITUATION</i>	29 – 45
GRITSENKO S.I. Doctor of Economics, Professor, Professor of Logistics Department of National Aviation University (Ukraine), KARPUN O.V. PhD of Economics, Associate Professor, Associate Professor of Logistics Department of National Aviation University (Ukraine), KOLISNICHENKO A. Students of Logistics Department National Aviation University (Ukraine) <i>DIGITALIZATION OF LOGISTICS COMPANY BUSINESS PROCESS IN CONDITIONS OF INDUSTRY 4.0</i>	46 – 56
HRYHORAK M.Yu. Doctor of Economics, Associate Professor, Senior Research Fellow, Institute of Cybernetics named after V.M.Glushkov National Academy of Sciences of Ukraine (Ukraine), TRUSHKINA N.V. PhD (Economics), Associate Professor, Senior Research Fellow, Regulatory Policy and Entrepreneurship Development Institute of Industrial Economics of the National Academy of Sciences of Ukraine (Ukraine), KITRISH K.Yu. PJSC MK Azovstal, Leading Engineer of the Department of Automation Management (Ukraine) <i>ORGANIZATIONAL AND ECONOMIC MECHANISM OF STRATEGIC MANAGEMENT OF SUSTAINABILITY OF SUPPLY CHAINS OF INDUSTRIAL ENTERPRISES</i>	57 – 76



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LOGISTICS CLUSTER AS A WAY OF IMPLEMENTING A MULTISOURCING MODEL TO ENSURE THE LIVELIHOOD OF THE LOCAL COMMUNITY

Lesia Kostiuchenko, Volodymyr Marchuk, Oleg Harmash. *"Logistics Cluster as a Way of Implementing a Multisourcing Model to Ensure the Livelihood of the Local Community". In recent years, the living conditions of territorial communities in Ukraine promote the integration of organizations and enterprises in various fields. The cluster is a group of localized interdependent companies, equipment suppliers, components, specialized services, infrastructure, research institutes, universities and other organizations that complement and enhance each other's competitive advantages.*

Current common problems that hinder the normal functioning of local communities are: utilities and energy efficiency, investment climate and investment, public safety, problems of access to administrative services, communication problems between the leadership of the local community and local population, environmental issues.

Based on the results of the study of the internal environment of the united territorial community, the benefits of cluster approach and the benefits that can provide a multisourcing model, it is determined that the main problems that hinder the normal functioning of modern communities can be solved by forming a logistics cluster. The logistics cluster will allow to fully implement the multisourcing model of ensuring the livelihood of the local community. Such model of decision-making on the rational choice of source of supply from several alternatives will: improve the quality of supply management of goods / services; reduce the logistics cycle; reduce

supply costs; increase the reliability of supplies, etc. Thus, the formation of a logistics cluster at the level of ensuring the livelihood of the territorial community helps to strengthen the competitiveness of each of the participants. The main participants of the cluster are: production and logistics companies located in the most important centers of intersection and origin of goods and goods, directly involved in the process of providing services.

Keywords: cluster, logistics cluster, internal environment of the cluster, multisourcing, united territorial community, problems of life of territorial communities.

Леся Костюченко, Володимир Марчук, Олег Гармаш. «Логістичний кластер як засіб реалізації мультисорсингової моделі забезпечення життєдіяльності територіальної громади». Впродовж останніх років умови життєдіяльності територіальних громад в Україні сприяють інтеграції організацій і підприємств різних напрямів діяльності. Кластер являє собою групу локалізованих взаємозалежних компаній, постачальників устаткування, комплектуючих, спеціалізованих послуг, інфраструктури, науково-дослідних інститутів, вузів та інших організацій, які взаємодоповнюють і посилюють конкурентні переваги одне одного.

Сучасними поширеними проблемами, які перешкоджають нормальній життєдіяльності територіальних громад, є такі: комунальні послуги та енергоефективність, інвестиційний клімат та залучення інвестицій, безпека громадян, проблеми доступу до адміністративних послуг, проблеми комунікації між керівництвом об'єднання територіальної громади та місцевого населення, екологічні проблеми.

На основі наведених результатів дослідження внутрішнього середовища об'єднаної територіальної громади, переваг кластерного підходу та переваг, які може надати модель мультисорсингу визначено, що головні проблеми, які перешкоджають нормальній життєдіяльності сучасних територіальних громад, можна вирішити шляхом формування логістичного кластера. Логістичний кластер дозволить повною мірою реалізувати мультисорсингову модель забезпечення життєдіяльності територіальної громади. Така модель прийняття рішень щодо раціонального вибору джерела постачання з декількох альтернативних дозволить: підвищити якість управління постачаннями товарів/послуг; скоротити логістичний цикл; зменшити витрати на постачання; підвищити надійність постачань тощо. Отже, формування логістичного кластера на рівні забезпечення життєдіяльності територіальної громади сприяє зміцненню конкурентоспроможності кожного з учасників. Основними учасниками кластера є: виробничі та логістичні підприємства, розташовані у найважливіших центрах перетину і зародження вантажів та товаропотоків, безпосередньо залучені до процесу надання послуг.

Ключові слова: кластер, логістичний кластер, внутрішнє середовище кластера, мультисорсинг, об'єднана територіальна громада, проблеми життєдіяльності територіальних громад.

Леся Костюченко, Владимир Марчук, Олег Гармаш. «Логистический кластер как средство реализации мультисорсинговой модели обеспечения жизнедеятельности территориальной общины». На протяжении последних лет условия жизнедеятельности территориальных общин в Украине способствуют совместной деятельности организаций и предприятий различных направлений деятельности. Кластер представляет собой группу локализованных взаимосвязанных компаний, поставщиков оборудования, комплектующих, специализированных услуг, инфраструктуры, научно-исследовательских институтов, вузов и других организаций, взаимодополняющих и усиливающих конкурентные преимущества друг друга.

Современными распространенными проблемами, препятствующими нормальной жизнедеятельности территориальных общин являются: коммунальные услуги и энергоэффективность, инвестиционный климат и привлечение инвестиций, безопасность граждан,

проблемы доступа к административным услугам, проблемы коммуникации между руководством объединения территориальной общины и местного населения, экологические проблемы.

На основе приведенных результатов исследования внутренней среды объединенной территориальной общины, преимуществ кластерного подхода и преимуществ, которые может предоставить модель мультисорсинга, определено, что главные проблемы, препятствующие нормальной жизнедеятельности современных территориальных общин, можно решить путем формирования логистического кластера. Логистический кластер позволит в полной мере реализовать мультисорсинговую модель обеспечения жизнедеятельности территориальной общины. Такая модель принятия решений по рациональному выбору источника поставки из нескольких альтернативных позволит: повысить качество управления поставками товаров/услуг; сократить логистический цикл; уменьшить расходы на поставку; повысить надежность поставок и т.д. Следовательно, формирование логистического кластера на уровне обеспечения жизнедеятельности территориальной общины способствует укреплению конкурентоспособности каждого из его участников. Основными участниками кластера являются: производственные и логистические предприятия, расположенные в важнейших центрах отправки и пересечения потоков товаров, непосредственно вовлеченные в процесс оказания услуг.

Ключевые слова: кластер, логистический кластер, внутренняя среда кластера, мультисорсинг, объединенная территориальная община, проблемы жизнедеятельности территориальных общин.

Introduction. Modern unstable in all respects living conditions of territorial communities in Ukraine contribute to the integration of organizations and enterprises in various fields. The formation of clusters has become widespread in recent years. It is worth noting that modern clusters have a complex multi-level organization; their structure is not standard; have different degrees of interaction (integration) of participants. The cluster is characterized by the presence of an internal competitive environment such as industry clusters (logistics, agriculture, socio-cultural, furniture, tourism, environmental, etc.). Thus, the cluster approach allows you to combine all the benefits of cooperation between companies and deepen their specialization, creating a significant multiplier effect in the region's economy.

Analysis of recent researches and publications. In the general sense, the cluster is a sectoral, territorial and voluntary association of business structures, who closely cooperate with scientific (educational) institutions, public organizations and local authorities in order to increase the competitiveness of their own products and promote economic development of the

region. Thus, a cluster is a group of localized interdependent companies, equipment suppliers, components, specialized services, infrastructure, research institutes, universities and other organizations that complement and enhance each other's competitive advantages.

It is worth noting the following definitions of "cluster" [5]:

- voluntary association of entrepreneurs who work closely with research institutions and local authorities in order to increase the competitiveness of their own products and promote economic development of the region;

- geographical concentration of similar, related or additional enterprises with active channels for business transactions, communications and dialogue, sharing specialized infrastructure, labor markets and services and having common opportunities or threats;

- branch, territorial and voluntary association of business structures that closely cooperate with scientific (educational) institutions, public organizations and local authorities in order to increase the competitiveness of their own products and

promote economic development of the region;

- network of suppliers, producers, consumers, elements of industrial infrastructure, research institutes, interdependent in the process of creating added value;

- a group of interdependent enterprises and organizations located on the territory of the settlement or near it, which complement and strengthen each other's competitive advantages.

That is, according to the interpretation of Sokolenko S.I. [5], cluster approach allows you to combine all the benefits of cooperation between companies and deepen their specialization, creating a significant multiplier effect in the economy. Thus, modern clusters are an important form with a complex multi-level organization. The structure of economic clusters is not standard. They have different degrees of interaction of participants from relatively simple network type of associations to multilevel cooperative and competitive entities.

However, on the other hand, the attractiveness of the region for the location of foreign direct investment and determines its competitiveness, which depends on a number of factors favorable business and business climate [7]:

- legal factors (regulatory acts, permitting procedures, legislation, safety, etc.),
- technological factors (transport, roads, production, utilities, communications, telecommunications, research, science),
- commercial factors (sales networks, individualization, response, location, cost),
- socio-cultural factors (attitudes, behavior, traditions, social norms).

According to the authors [7], the ability to compete for flows of external resources primarily for foreign direct investment is embodied in ratings of ease of doing business, investment attractiveness of countries, markets, territories, global competitiveness index, etc. The article [6] names the main current problems that hinder

the normal functioning of territorial communities, including the following:

- utilities and energy efficiency,
- investment climate and investment,
- public safety,
- problems of access to administrative services,
- communication problems between the leadership of the local community and local population,
- environmental (ecological) issues.

Ecological problems of territorial communities are investigated in the publication [2]. In accordance with the legislation of Ukraine on the provision of housing and communal services, the authority to process and dispose of household waste, as well as the establishment of tariffs for household waste management transferred to local governments, which led to demonopolization of the market for processing and disposal of household waste. However, the non-adoption at the legislative level of the introduction of extended liability of producers and importers of goods is currently hindering the development of the field of household waste management.

The purpose and objectives of the study. Analysis of the publications of the above authors and many other publications shows that views on the origin and content of the cluster approach of practitioners and academic experts do not differ significantly. However, the researched publications do not have enough information on the formation of logistics clusters at the level of territorial communities.

That is why the purpose of this study is to explore current trends in the development of logistics clusters at the level of territorial communities in Ukraine as a means of resource provision of the territorial community.

Basic material and results. Studies of current trends and living conditions of territorial communities in Ukraine have shown an intensive focus on clustering. Clusters are formed with the participation of different numbers of participants, but the

main goal of the cluster approach in all cases is to achieve a synergistic effect.

On the one hand, clustering is economic in nature, and on the other - involves the possible contribution of the state, business,

education and science in the development of the individual, society and country. The Figure 1 shows the following principles of cluster cooperation defined by the Ukrainian Logistics Alliance [1].

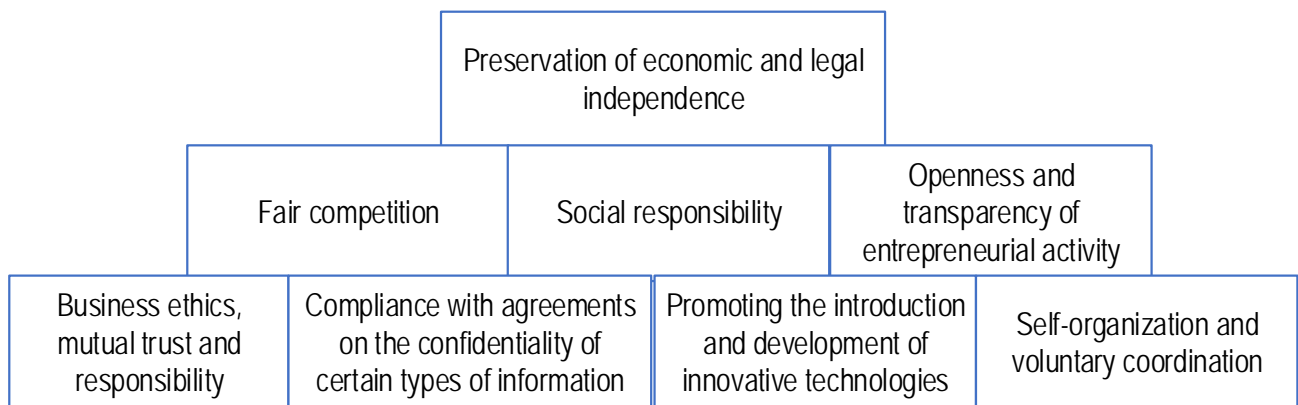


Figure 1 – Principles of cluster cooperation

Source: revised by the author on the basis of [1]

Thus we can highlight the following principles of cluster cooperation:

- close interaction between the participants of the logistics cluster, as well as with stakeholders;
- maximum use of innovations;
- intensifying the creation of new knowledge and ensuring their transfer;
- guarantee of ecological activity;
- development of human capital which is the bearer of key competencies of logistics companies;
- ensuring high quality services which is a source of competitive advantage and efficiency of the logistics cluster.

Adherence to the above principles of cluster cooperation by each partner will harmonize relations both within the cluster and between the cluster and the environment. Involvement of individual members of the community in its joint projects with other participants (investors, business, socio-cultural sector, waste sorting complexes, etc.) can be planned and designed in the Community Development Strategy. Thus directions of activity in formation of The Strategy can be various. For example, the creation of a dialogue platform for entrepreneurs, the creation of advisory

boards, the creation of a transparent and effective base in local government, the development of open databases on land and real estate, the creation of an industrial park, increasing access to finance for entrepreneurs, namely affordable credit when the local self-government body acts as a guarantor or pays interest on loans, assistance in obtaining grants, appropriate rates of local taxes and fees, training of qualified personnel for entrepreneurs, development of an investment brand, etc. [8].

The study of the cluster with the participation of the territorial community from the middle allowed to identify the following characteristics:

1. Any territory resembles a diversified company operating in many markets (on the territory of the United Territorial Community (UTC) can be concentrated different activities, local governments are not always able to directly influence those activities that are developing in this territory).

2. Focus on the creation of public non-profit organizations (for example: the activities of the association of farmers in a certain area may be aimed at developing and agreeing tools and mechanisms to support farms by local governments).

3. UTC's image, its reputation in domestic and foreign circles of potential investors are the main factors in promoting various projects, the most important resource for establishing partnerships.

4. There are three target groups of the cluster or "consumers of territories" UTC: residents, enterprises, guests.

The components of the internal environment of UTC include (see Table 1):

Table 1 – Components of the internal environment of the United Territorial Community

The complex of resources of the UTC territory	Socio-economic condition of the territory of UTC	Situational factors within the "collective leader"
<i>Natural resources and geographical location (mineral resources (fuel and energy, ores, chemical raw materials, natural building materials and non-metallic minerals) and biosphere resources (land, water and biological resources), etc.)</i>	Can be assessed by groups of indicators that reflect: the finances of the territory of UTC	Affects the performance of management functions in UTC
<i>Technological resources (a set of resources that allow to conduct production activities on the territory)</i>	Economic and social well-being of the inhabitants of UTC	
<i>Social resources (a set of relationships that arise between people inhabiting the territory, in the process of their interaction with each other)</i>	The level of development of the productive and non-productive spheres on the territory of UTC, etc.	

Source: Source: revised by the author on the basis of [6, 7, 8]

The Figure 2 shows the scheme of interaction of cluster participants such as elements of the internal and external environment of the cluster in the cell UTC.

The optimal combination of internal and external resources of suppliers is sourcing. According to the author, this is a key process in community management, where the leading link is the concept of total living expenses. It is advisable to give preference to the concept of logistics outsourcing, which is to address the feasibility of using their own capabilities and resources to perform certain

logistics functions that can be entrusted to an external partner. However, in the current context of rapid change, it is important to make quick and efficient decisions about sources of supply regardless of which sourcing model is used. Safety (reliability and stability) of supplying is at the top of the list. Therefore, it is valuable to quickly decide on the optimal source of supply as the optimal combination of internal resources of the company and the resources of external suppliers.

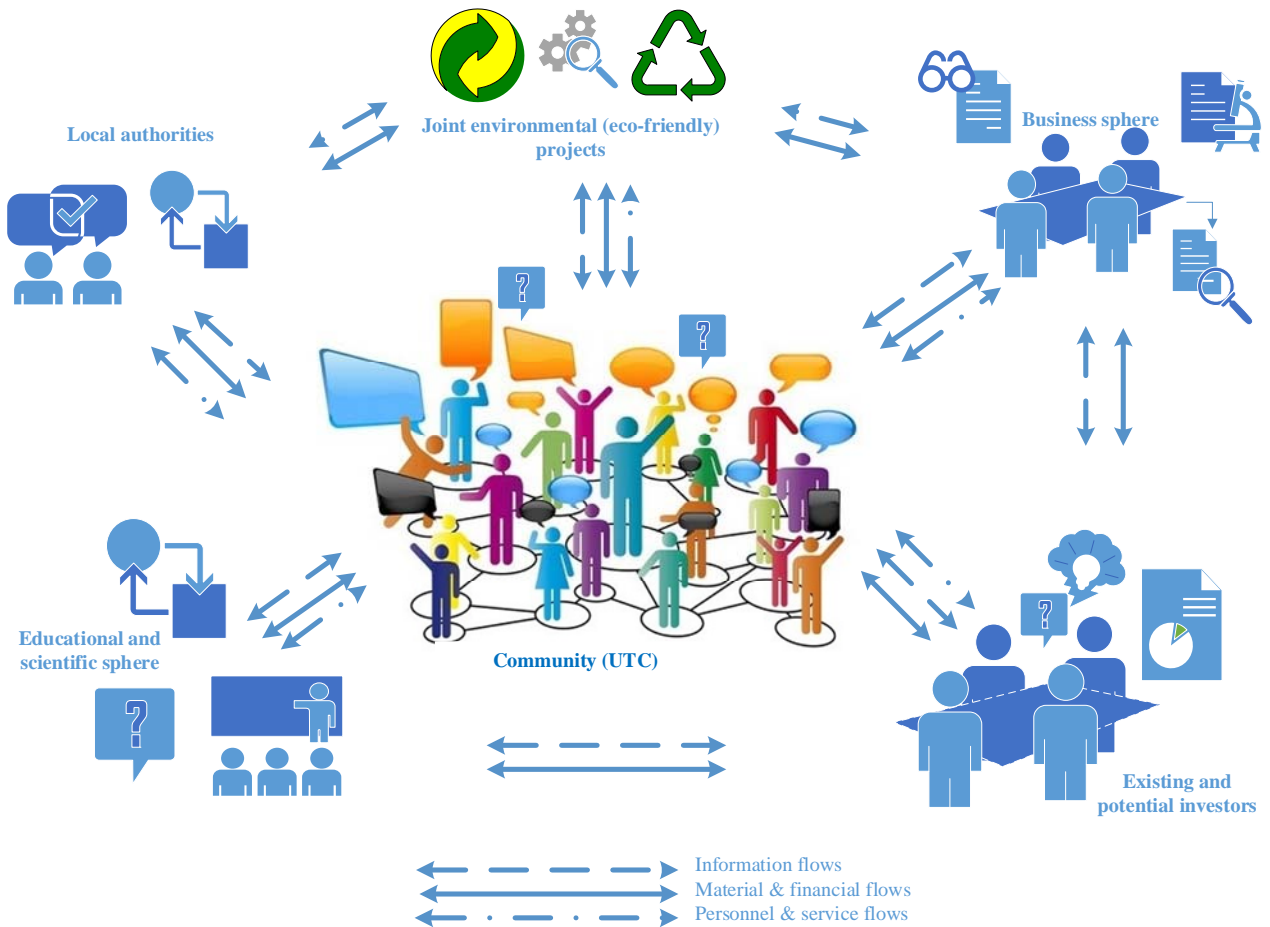


Figure 2 – Relationships between elements of the internal and external environment of the cluster on the territory of the United Territorial Community

Source: revised by the author

Multisourcing is a type of outsourcing that many companies use in conditions of frequent change. The multisourcing model involves the use of several different suppliers of the same product at different times (the decision depends on the level of security), as well as the efficient use of internal sources of supply of goods / services. A more detailed study of this subject is described in the author's article [3]. Thus, the decision on the rational choice of source of supply from several alternatives is based on the achievement of the following main objectives: to improve the quality of supply management; reduce the logistics cycle; reduce supply costs; increase the reliability of

supplies, etc. Thus, it can be assumed that the formation of a logistics cluster in the UTC environment can be a means of implementing a multisourcing model to ensure the viability of the local community.

Based on the processed information materials and described above model we can give the following definition of a logistics cluster. Thus, the logistics cluster is a form of integration of participants in the logistics services market, which will provide maximum synergy based on optimization, innovation and coordination of economic interests of all participants in the supply chain (see Figure 3).

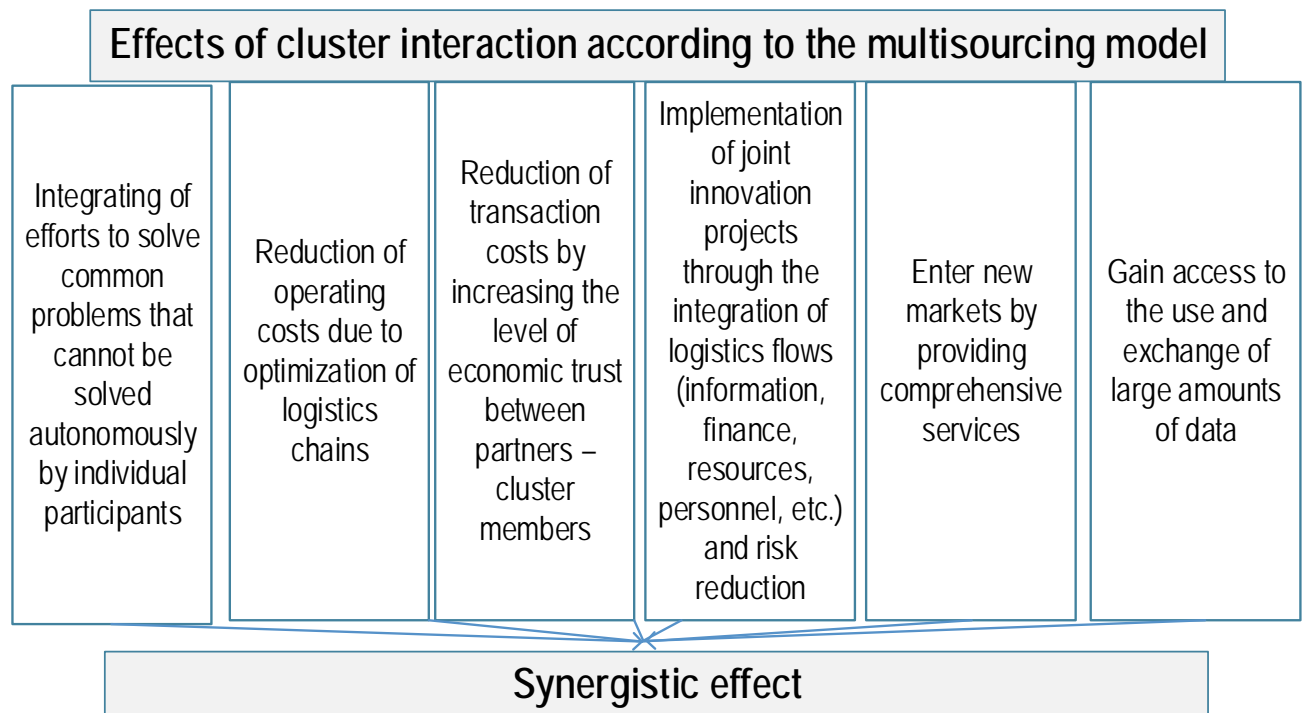


Figure 3. – Elements of synergetic effect from cluster interaction of participants according to the multisourcing model

Source: revised by the author on the basis of [1]

Conclusions. Based on the results of UTC's study of the internal environment, the advantages of the cluster approach and the advantages that the multisourcing model can provide, we conclude that the main problems that hinder the normal functioning of modern local communities can be solved by forming a logistics cluster. That is, deciding on the rational choice of source of supply from several alternatives allows to achieve the following main goals: to improve the quality of supply management of goods / services;

reduce the logistics cycle; reduce supply costs; increase the reliability of supplies, etc. Thus, the formation of a logistics cluster to ensuring the livelihood of the territorial community helps to strengthen the competitiveness of each of the participants. The main participants of the cluster are: production and logistics companies located in the most important centers of intersection and origin of goods directly involved in the process of providing services.

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