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## **OPPORTUNITIES FOR THE FORMATION OF MARITIME TRANSPORT CLUSTERS AND ITS ROLE IN ECONOMIC DEVELOPMENT**

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Studying of current economic and international relations in the world showed that every country tries to enlarge its relations by using different methods, direction of which will lead to the sea. Seaside regions are particular transportation polygon and it provides rational access to the world goods market, which itself has influence on country's economic proficiency and improvement of living level in population.

In clusters policy, scientists consider important supporting policy for companies and enterprises important for developing of particular region/branch. It is important to evaluate the potential of marine-transportation system in seaside regions, particularly in Adjara region, define possibilities and perspectives of clusters formation creating, learn European experience and draw possible parallels.

Very interesting example of cluster formations in Europe gives marine cluster in Finland, for which marine industry is very important for the development of the country, which is determined by its geographical location. So marine industry is essential for country, which is the most important form of implementation of outing trade for Finland. The seaport works on international level and attract the currency of cash funds from international market to the national economy. The functioning of seaport and marine transportation in general, is essential for export industry in Finland. Marine cluster in Finland is formed according to the participating of marine, marine industrial and seaport, private and state sectors.

It is important to discuss possibilities of customizing European model of clusters formation on Georgia, particularly in Adjara region. There are advantages of creation marine clusters in Ajara region, such as: strong warehouse farms, appropriate geopolitical location, mighty seaport, regulated transportation infrastructure, attractive investing environment, developing of different directions in tourism, which creates best basis for creation of marine clusters at the end.

Therefore, clusters can have effect on the opinions of state organs about effective governing of the territory, revealing the possible attraction of new investments, ensuring the development of not only specific regions, but also the whole country.

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მსოფლიოში გამძაფრებული ეკონომიკური და საერთაშორისო ურთიერთობების ანალიზი ცხადყოფს, რომ ნებისმიერი სახელმწიფო სხვადასხვა მეთოდით ცდილობს შექმნას ზღვაზე გასვლის ოპტიმალური გეოგრაფიული და პოლიტიკური გარემო. ანალოგიური მიდგომის ძირითადი არსი იმაშია, რომ ზღვისპირა რეგიონები წარმოადგენენ განსაკუთრებულ სატრანსპორტო პოლიგონს მსოფლიო სასაქონლო ბაზარებზე რაციონალური წვდომისათვის, რაც თავისთავად ქვეყნის ეკონომიკურ სიძლიერეზე, კეთილდღეობასა და მოსახლეობის ცხოვრების დონის გაუმჯობესებაზე აისახება.

მნიშვნელოვანია საქართველოს ზღვისპირა რეგიონების, კერძოდ კი აჭარის რეგიონის საზღვაო-სატრანსპორტო სისტემის პოტენციალის შეფასება და რეგიონში კლასტერული ფორმირებების შექმნის, მისი განვითარების შესაძლებლობების და პერსპექტივების განსაზღვრა, კლასტერული ფორმირებების ევროპული გამოცდილების შესწავლა და შესაძლო პარალელების გავლება.

მნიშვნელოვანია საზღვაო კლასტერების ფორმირების ევროპული მოდელის მორგების შესაძლებლობების განხილვა საქართველოს, კერძოდ კი აჭარის რეგიონზე.

აჭარის რეგიონში საზღვაო კლასტერის შექმნისათვის არსებობს როგორცაა: მძლავრი არაერთი საფუძველი, მათ შორის ისეთი მნიშვნელოვანი როგორცაა: ხელსაყრელი გეოპოლიტიკური მდებარეობა, მძლავრი პორტი და გამართული სატრანსპორტო ინფრასტრუქტურა, მიმზიდველი საინვესტიციო გარემო, ტურიზმის სხვადასხვა მიმართულებების განვითარება, მძლავრი სასაწყობო მეურნეობა, რაც საბოლოო ჯამში ქმნის საზღვაო კლასტერების შექმნის საუკეთესო წინაპირობას.

გარემოება მოწმობს, რომ კლასტერებს შეუძლიათ შეიმუშაონ მოახდინონ მთავრობის ორგანოების შეხედულებებზე ტერიტორიის ეფექტური მართვის კუთხით, გამოავლინონ ახალი ინვესტიციების მოზიდვის შესაძლებლობები, დააჩქარონ როგორც ცალკეული ტერიტორიის, ისე მთლიანად სახელმწიფოს ეკონომიკური განვითარება.

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The unity of current globalization processes at the level of modernization of the world, which are distinguished with permanent changes in political and economical formations, acceleration of technological and social innovations, helps to accelerate the forming process of world's economy as well. Rising the level of development of high technologies sphere supported the stability of relations between organizations and individuals existed in the world, not only by economical relations, but also by political and social relationships.

The dynamism of modern world mostly effects those countries which do not have, or have but it is not on appropriate level, effective mechanisms needed for developing of the sphere of economy and politics. Exactly the internal affairs is the important factor, which determines the amount and form of profit taken by the country from globalization processes that is an actual issue nowadays.

Studying of current economic and international relations in the world showed that every country tries to enlarge its own territory by using different methods, direction of which will lead to the sea. Seaside regions are particular transportation polygon and it provides rational access to the world goods market, which itself has an influence on country's economic proficiency and improvement of living level in population.

The national economy of country, economic enlarging, development of territorial complexes and economic activities abroad are strongly connected with the developing the level of country's transportation system. The level of transportation system shows the level and competitiveness of national economy development and on the other hand, afford to evaluate long-term strategic relations between economic subject during the formation, without considering the form of owning and its sphere.

At the modern stage, taking into consideration current social, economic or political factors, for any seaside country, seaport activity is a priority and very important into strategic policy, which is directed to stability and supports economic development of the country, as for existing the seaport is a valuable and keyword resource, which supports successful involvement into transportable system and raising the competitiveness and awareness of country and region as well.

The end of 20th century and the beginning of 21th century is characterized with accelerating the process of developing of seaport regions. The intensity of potential mastering is sharply increased, the functions of seaside line are improved, different territorial-industrial and seaport-industrial complexes are created, which have sharply expressed specialization of transportable-resourcing or transpartial-industry [4].

According to above-mentioned, it is important to discuss one of the priority of economic policy-the possibilities of cluster formation and perspectives of its development, especially to study it on time in marine-transportable system, which is done for rising country's competitiveness. The developing of effective cluster model by the country will support the development of technologic innovations and also will lead to easy adaptation to the goods and technology accumulated abroad [5].

As a rule, clusters policy is described as a supporting policy of particular companies and enterprises, which provide developing of particular region or branch. In general, cluster is created by combining specific elements in one system, which is equipped with some functions or it is created by achieving of specific goal of enterprising.

According to the theory of Michael Porter, "cluster- is unity of geographically related companies and connected organizations, which act in specific sphere and are characterized with

one and the same activity and relationships” [2].

It should be mentioned that clustering concept means the informal and voluntary unity of organizations and enterprises, activities of which take place on specific territory and also their aim is to use the economic potential of the region and sphere optimally. To achieve this aim, it is essential to use not only the enterprising-financial effort of seaside region sector, but also it is important to use and involve maximally potential of scientific and educational organizations, which will support the developing of marine sphere and marine-transportable system in the region.

As many global examples show, cluster formations include not only interconnection, but also co-operation. Companies which are included into cluster, can increase their competitiveness by using the following ways:

- Clusters increase the production of the company, which can be regarded as the advantage of companies working in one and the same geographical zone.
- Those clusters the working of which are directed to innovative and high-technological projects can reach the growing of economy faster than others.
- Cluster gives the stimuli to create a new organization which will be the part of the same cluster in future and strengthens it by the way [2].

Clustering approach is profitable not only for organizations participating into cluster, but also for the development of the whole country.

Clusters created on the level of territories helps the rising the level of employment in population, increasing the level of paying, developing of stable and competitive regional enterprising and it also gives the basis of diversification of economical development on the given territory.

It is not arguable today that formation of marine clusters is perspective, because this will

help to solve the problem of interaction between all the structures participating in this activity. It can be involvement of local self-government or using the experience of marine specialists.

Nowadays defining the level of perceptiveness of clusters creations is not arguable, because above-mentioned will support to solve relation problems between the participant structures in seaport activities, problems like attracting local authority and its involvement, or using other marine specialists.

Developing of Georgian seaports and transportable systems related to them is important matter and prior issue nowadays. Which play important role in the developing the economy of the whole country.

It should be noted that high level of sea industry in Europe in general defines the developing of living level of Europeans, as amount of transporting goods determines the main factor of world trade. Outer trade in Europe is implemented by the help of seaports. European seaports serve about 3,5 million tons of cargo in a year and more than 350 million people use the service of these seaports. According to this, marine transport and services connected to it are vitally important in European landscape. The 40% of oil and 60% of gas used in Europe are taken from these marine-transportable systems. The sea ensures the existing a wide range of energetic-transportable routes, turnover, underwater pipes and working of electronic systems in whole Europe [12].

Seaside regions of Europe take important part in developing of marine industry, particularly in turnover, shipbuilding and also in the sphere of world tourism. Cruise tourism is quickly developing in Europe, increasing about 10% annually. Another important sphere is fishing which is the main source of food in some regions and is an important sector in employment sphere [12].

Europe takes important and powerful global position in the developing of different sectors in marine industry. The most important is to keep the competitiveness of marine clusters. Many European countries set as a priority the developing of seaside sector and many of them created cluster formations.

In 4th November, 2005 “European Union of Maritime Clusters” (ENMC) was established in Paris by uniting 10 European countries (Denmark, Finland, Germany, Italy, Holland, Norway, Poland, Spain, Switzerland, Great Britain). The goal of this network was to share/gather experience and knowledge for developing co-operation of seaports in participant countries and developing their economy as well [12].

Very interesting example of cluster formations in Europe gives marine cluster in Finland, for which marine industry is very important for the development of the country, which is determined by its geographical location. So marine industry is essential for country, which is the most important form of implementation of outing trade for Finland. The seaport works on international level and attract the currency of cash funds from international market to the national economy. The functioning of seaport and marine transportation in general, is essential for export industry in Finland. Marine cluster in Finland is formed according to the participating of marine, marine industrial and seaport, private and state sectors.

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directed to innovative and high-technological projects can reach the growing of economy faster than others.

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Clustering approach is profitable not only for organizations participating into cluster, but also for the development of the whole country. Cluster supports raising employment into the population, the level of paying, the development of sustainable and competitive regional production. Also, it will give the basis of economic development of the country.

The actuality of this research will be added by the analysis of the process of implementing cluster policy in Georgia, particularly the formation of marine clusters, which is one of the most important factor of economic growth, rising the potential and competitiveness of the region.

The current processes in Georgia for last decade, its integration and involvement into international processes, appropriate geopolitical location of the country under which is meant its existence on ancient crossroad, all of these factors supported cluster formation to be actual in Adjara region which is tightly connected with involving the country into the world economic relations. We should pay attention that the region has historic experience of existing free economic zones on its territory, which is testified by the declaration of Batumi as “Porto Franko” in 29th October, in 1878. This is additional condition of creating clusters formation in this region. A history of creation of Batumi Maritime Harbor is practically the history of formation of logistics center in Caucasus region that defined the role of Georgia as a transitional country.

Nowadays Batumi seaport is a bond of not only our transportal system but also it is the important part of European transportal corridor and strong

transportal object of international meaning, which has:

- Container terminal and complex of harboring for serving the ferries.
- Cargo terminal.
- Passenger terminal
- Batumi oil terminal.

Batumi harbor is a main marine gate of Georgia and the economic development of not only in Adjara region but also in the whole country depend on its stability. Batumi marine harbor was historically the logistics center of Caucasus region. Particularly it is one of harbors of Georgia, by the help of which Georgia became transiting country. Today Batumi plays important role into the life and development of the region.

The comprehensive loading of Poti seaport, which is connecting ring while transporting cargo from Turkey, nearest East and Europe to the middle Asian countries and Afghanistan. Seaport of Poti implements transportation in three main directions:

- Transportation to Russia and Azerbaijan from bordering line-Samuri/Yalama.
- Transportation in Turkmenistan, Afghanistan, Tajikistan, Uzbekistan by ferry to Baku-Turqmenbash.

- It is not arguable today that formation of marine clusters is perspective, because this will help to solve the problem of interaction between all the structures participating in this activity. It can be involvement of local self-government or using the experience of marine specialists.

It's important to note that, In February, 2008, subsidiary company of JSC "Yaztransoil"-Ltd "Batumi Industrial Holding "gained the exclusive right to rule Batumi Seaport for 49 years and 100% of shares of Batumi Oil Terminal. SC "Yaztransoil" is a subsidiary company of JSC "Yazmunaigaz", which is main operator in oil transporting in Yazakhstan. The aim of purchasing actives of Batumi Seaport is clear, it is about creating new export window in transporting oil and oil products. This direction will help Kazakhstan to diversify oil streams and stop the depending on terminals owned by other countries [8].

Batumi Sea Port provides unified software for ship's agents, suppliers, brokers and forwarders. Daily Ships position, online statement-of-facts, cargo handling accounting, ship/cargo charges calculating and ships visitors monitoring system, ship supply modules, disbursement proforma calculation

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Dry cargo turnover, thousand MT	1 223	1 518	1 577	1 721	1 203	1 046	862	795	1189
Oil&oil products, million MT	5.4	5.4	5.2	5.8	4.5	3.9	3.4	2.1	1.0
Containers turnover, TEU	16318	45442	72126	72123	61980	54695	55781	76025	90002
Ships call, unit	797	862	697	714	585	570	663	527	584

Diagram 1. Statistics [9]

Throughput efficiency of the oil terminal is – up to 15 million tons annually. The terminal specializes in refining raw oil and almost all types of oil products: diesel fuel, petrol, reduced fuel and so on. The given berths are leased to Ltd “Batumi Oil Terminal” until 2019.

Throughput efficiency of the container terminal is 100 000 TEU annually. The container terminal has open storing areas and possesses transshipment equipment, which specializes in operating with containers in direct and storage ways.

different directions in tourism, which creates best basis for creation of marine clusters at the end. But In this case important to note that, firstly is necessary to study the region, its potential and determine the level of its readiness, especially in maritime transport systems.

During the research, respondents were selected for interviews, the main purpose of which was to show the attitude of decision-makers, companies and specialists involved in cluster formations, and also to identify the potential of the region. 100 respondents were interviewed,

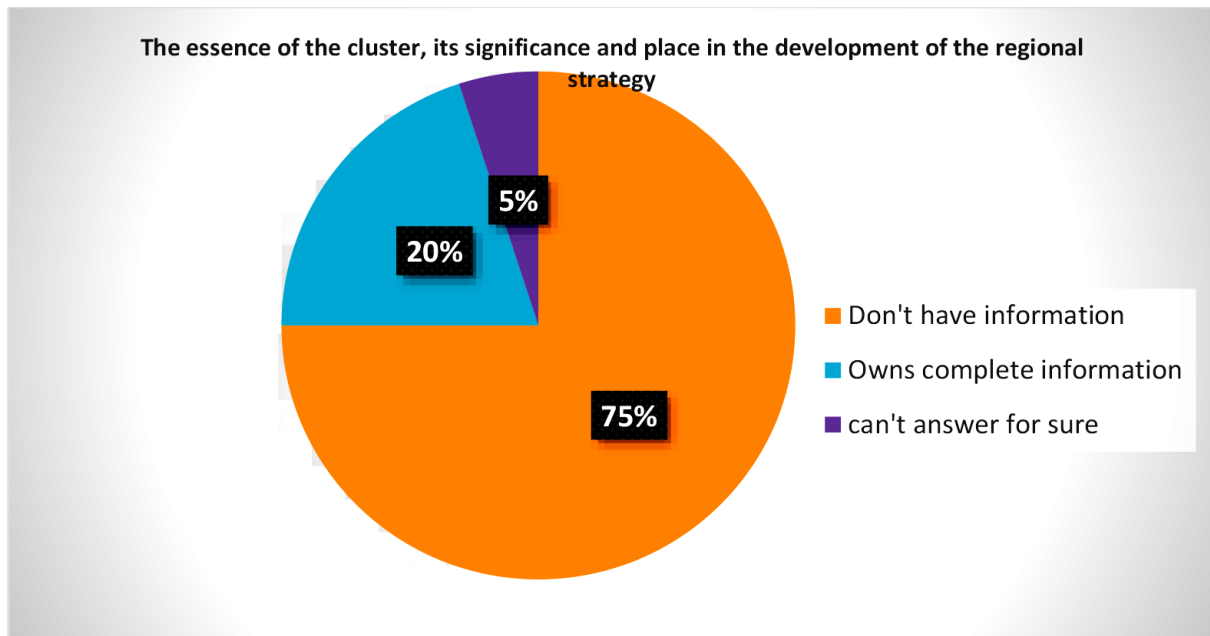


Diagram 2. The essence of the cluster, its significance and place in the development of the regional strategy

Maximum throughput of the dry cargo terminal – 2,0 million tones annually.

The marine passenger terminal is situated in the center of the city, in the seaside boulevard. The throughput efficiency is about 180 000 passengers annually [9].

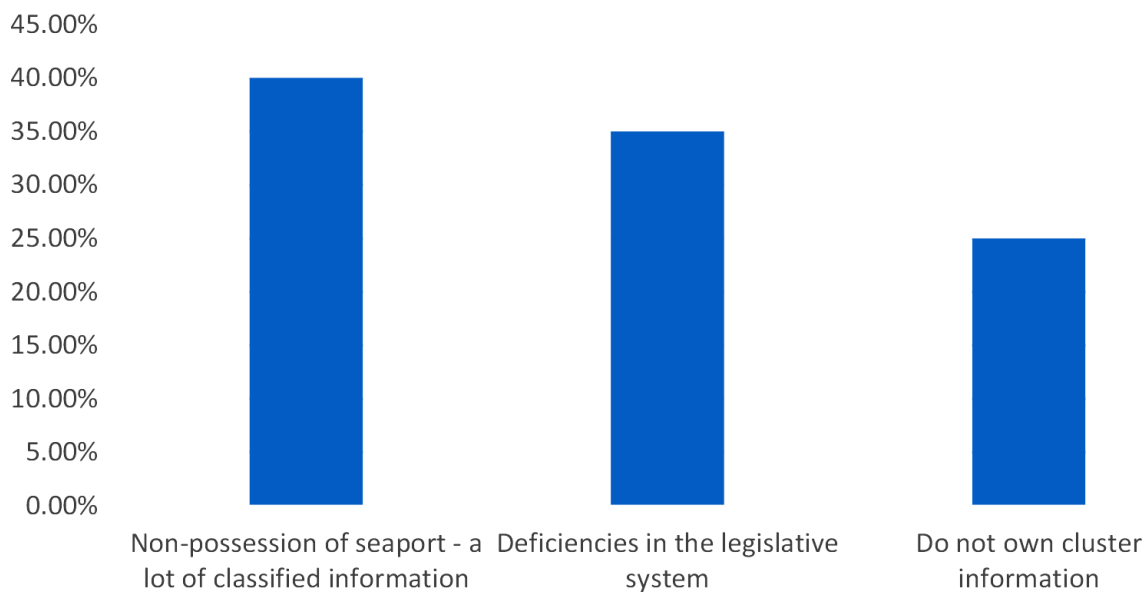
There are advantages of creation marine clusters in Ajara region, such as: strong warehouse farms, appropriate geopolitical location, mighty seaport, regulated transportation infrastructure, attractive investing environment, developing of

during which were identified the most important problems - low awareness of clusters (diagram N 1), non-possession of the most important facility as a seaport and deficiencies in the legislative system (diagram N 2).

From the initial results of the study it is clear that, despite the potential of the region and its growing development, there are problems, in particular, non-possession of the port.

Nowadays developing of Georgian seaports and transportable systems connected to them is a priority and important matter, which plays

Factors that impede cluster formation



important role in the developing of economy in the country. And the development of the port and its associated transport systems is currently a priority and important issue, which plays an important role in the overall development economy of the country.

Maritime transport cluster formation can improve the economic situation of the region, this will establish coordinated relations between cluster members, improve the accurate and timely flow of information, solve problems with logistics, provide an opportunity to raise funds and develop organizations involved in the cluster, increase the level of development of the services sector and the general standard of living of the region.

In this case, cluster can be formed from such bodies as the port of Batumi, the Maritime Transport Agency, banking and financial institutions, government and local self-government authorities, non-governmental organizations, research institution and Region science-education centers.

Therefore, it is necessary to identify problems at the state level and develop an action plan

that will allow us to optimally use the economic potential of the region and the industry in the future.

To achieve this goal, it is necessary to use not only the power of industrial-financial sector of seaside region, but also the potential of scientific and educative organizations should be used and involved, which will help the development of marine sphere and marine-transportal system.

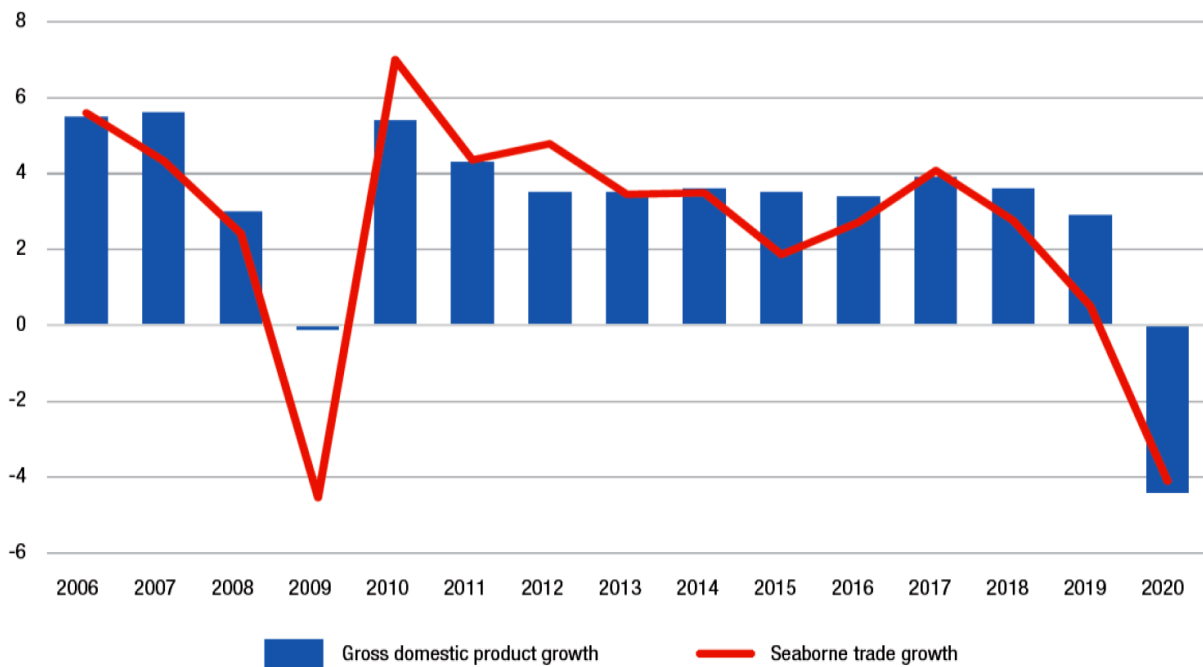
The formation of maritime transport clusters offers great opportunities and prospects for the region, but there are a number of difficulties that hinder the formation of clusters:

The first and main problem is the alienated port and the non-use of its capabilities, which is clearly shown in statistical diagram N 2;

Low level of public and private structures awareness of the cluster and its capabilities (Diagram N1)

Pandemic situation caused by covid-19, is a global health crisis, which appeared to be a serious threat not only for world health organization, but also for global economy. IN fact, world pandemical was the challenge for the developing of all sphere.





**Diagram 4. Development of international maritime trade and global output, 2006-2020**

**Source:** UNCTAD calculations based on data from UNCTADstat.

Maritime transport underpins global supply chain linkages and economic interdependency with shipping and ports estimated to handle over 80% of global merchandise trade by volume and more than 70 by value as result, when disruptive factors such as pandemics occur, the sector works as a transmission channel that sends shockwaves across supply chains and regions.

The pandemic has sent shockwaves through global maritime transport. Global maritime trade will plunge by 4.1 % in 2020 due to the unprecedented disruption caused by COVID-19.

According to the trade association International Chamber of Shipping (ICS), losses caused by the pandemic for the shipping industry total 350 million per week.

As the recent events have shown, during economic decreases, governments of different states try to use all techniques for economic stimulation, also for trade developing. According to the opinions of experts, they think that pandemic will give more advantages than disadvantages to globalization, which will be vivid at the end of pandemic. It is historically proved that all global challenges are over with coordination of strength to avoid risks of appearing situations alike.

Developing of effective clustering models for specific countries will help to develop technological innovations, now-hows and inventions, and also will help the adaptation with new material and technologies

**ლიტერატურა/ REFERENCES**

- [1] **Feiqrishvili.m** “The importance of creating free economic zones in developing external trade in Georgia “science, 1998, p.141;
- [2] **Porter.M.**“Competitiveness”handbook;Vilime,2005,p.495;
- [3] **Asauli.A.**“The organization of enterprising”,Piter,2005,p.368;
- [4] **Lipeck I.,Puliarkin V.,Shalikhter,**“The Geography of World Trade”ВЛАДОС, 2015, p.400;
- [5] **Khikretov R.,**“The Actual Problems of Economy and Law. Magazine, 2009, N1;
- [6] [http://ecopolitics.ge/?page\\_id=800](http://ecopolitics.ge/?page_id=800) \_ Mamuladze R.”The Main Directions of developing potential of Georgian Maritime-Transportable and Logistics. “The committee of sectorial economy and economical politics-economic council-Georgian Parliament;
- [7] [%20ekonomikuri%20zona.pdf](#) \_ Business and Economic Centre; Portal of Ajaria Government;
- [8] Memorandum of interperception between Batumi city and Batumi Seaport, Georgia and Dublin Seaport, Ireland;
- [9] Report of Euro commission-The Role of Maritime Clusters in Developing of European Maritime sector, November, 2008;
- [10] <http://forbes.ge/news/188/saqarTvelos-portebi> \_ Forbes Georgia;
- [11] [www.batumiport.com](http://www.batumiport.com) \_ Batumi Seaport web-site;
- [12] [www.adjara.gov.ge/branches/description?gtid=436519&gid=5#.WX8zpYjyiM9](http://www.adjara.gov.ge/branches/description?gtid=436519&gid=5#.WX8zpYjyiM9) Information