

Nino Abesadze

E-mail: nino.abesadze@tsu.ge

Associate Professor, Ivane Javakhishvili

Tbilisi State University

Tbilisi, Georgia

ORCID ID: 0000-0002-6564-2771

Otar Abesadze

E-mail: o.abesadze@gmail.com

Associate Professor, Georgian National University SEU

Tbilisi, Georgia

ORCID ID: 0000-0003-1644-4995

Nino Paresashvili

E-mail: nino.paresashvili@tsu.ge

Associate Professor, Ivane Javakhishvili

Tbilisi State University

Tbilisi, Georgia

ORCID ID: 0000-0001-7645-6491

MODERN STATISTICAL TRENDS OF EXPORTS BY SEA TRANSPORT TO THE CIS COUNTRIES

Abstract. *In the modern conditions of globalization, the use of sea transport is becoming more and more popular, the share of which is quite high in export trade relations.*

The main goal of the paper is to outline the trends in export under the conditions of sea transport and to determine the main parameters. Analysis, synthesis, induction, deduction were used in the research process, as well as specific statistical methods: observation, grouping, and analysis. For the purpose of analysis, data were processed, and indicators were calculated with computer software SPSS.

Over the years, historically, the CIS has been and still is one of the major trade partners of Georgia. Its share in the total volume of exports is almost 50%, which was characterized by certain fluctuations in 2016-2022. If at the beginning of the period, only 35% of Georgia's total exports went to CIS countries, by 2019 its share increased to 53.8%.

Export relations with the CIS are mainly carried out by road (81%), while marine transport has a share of 9.8%. In 2016-2022, the average annual growth rate of exports to the CIS countries amounted to 123.9%, while the increase of exports by sea transport was 19% annually during the same period. In 2022, the share of exports by sea transport decreased, which makes up 4.7% of the total export in the CIS countries, which is 5.9 percentage points lower than the previous year's figure. Despite the fact that before and after the pandemic, Georgia has active trade relations with the countries of the region, but a large part of re-exports, 94%, goes to the CIS countries, by road and then by sea.

Georgia's total export to the CIS increased by 33.3% compared to the previous year, while local export decreased by 1%. The increase in exports to the CIS was largely related to the increase in re-exports because in this period re-exports increased by 76%. Despite the growth of domestic exports, re-exports have a significant share in the total exports of Georgia with the CIS, and its change affects the characteristics of foreign trade. Accordingly, the ratio between local export and re-export is

variable, which amounted to 0.69 in 2022.

Keywords: Export, Sea Transport, Cis Countries, Analysis, Structure.

JEL classification: C0

ნინო აბესაძე

E-mail: nino.abesadze@tsu.ge

ასოცირებული პროფესორი, ივ. ჯავახიშვილის
სახელობის თბილისის სახელმწიფო უნივერსიტეტი
თბილისი, საქართველო

ORCID ID: 0000-0002-6564-2771

ოთარ აბესაძე

E-mail: o.abesadze@gmail.com

ასოცირებული პროფესორი, საქართველოს ეროვნული
უნივერსიტეტი (სეუ)
თბილისი, საქართველო

ORCID ID: 0000-0003-1644-4995

ნინო ფარესაშვილი

E-mail: nino.paresashvili@tsu.ge

ასოცირებული პროფესორი, ივ. ჯავახიშვილის
სახელობის თბილისის სახელმწიფო უნივერსიტეტი
თბილისი, საქართველო

ORCID ID: 0000-0001-7645-6491

დსთ-ს ქვეყნებთან საზღვაო ტრანსპორტით ექსპორტის თანამედროვე სტატისტიკური ტენდენციები

სტატიაში განხილულია საზღვაო ტრანსპორტით ექსპორტის თანამედროვე ტენდენციები, ქვეყნების ჯგუფებიდან აქცენტი გაკეთებულია დსთ-ს ქვეყნებზე. გამოვლენილია ექსპორტის გეოგრაფიული და გაანალიზებულია სასაქონლო სტრუქტურა. გამოკვეთილია საექსპორტო ქვეყნების და გამოვლენილია საექსპორტო საქონლის ტოპ-ათეული. გაკეთებულია მათი შედარებითი ანალიზი დინამიკაში და დასაბუთებულია გეოგრაფიულ და სასაქონლო სტრუქტურაში არსებული სტრუქტურული ცვლილებები.

კვლევის პროცესში გამოყენებულ იქნა სტატისტიკური დაკვირვების, დაჯგუფებისა და ანალიზის მეთოდები.

წლების განმავლობაში, ისტორიულად, დსთ იყო და არის საქართველოს ერთ-ერთი მთავარი სავაჭრო პარტნიორი. მისი წილი ექსპორტის მთლიან მოცულობაში თითქმის 50%-ია, რაც 2016-2022 წლებში გარკვეული რყევებით ხასიათდებოდა. თუ პერიოდის დასაწყისში საქართველოს მთლიანი ექსპორტის მხოლოდ 35% გადიოდა დსთ-ს ქვეყნებში, 2019 წლისთვის მისი წილი 53.8%-მდე გაიზარდა.

დსთ-სთან საექსპორტო ურთიერთობა ძირითადად სავაჭრომომილო გზით ხორციელდება (81%), ხოლო საზღვაო ტრანსპორტის წილი 9,8%-ია. 2016-2022 წლებში დსთ-ს

ქვეყნებში ექსპორტის საშუალო წლიური ზრდის ტემპმა 123,9% შეადგინა, ხოლო საზღვაო ტრანსპორტით ექსპორტის ზრდა იმავე პერიოდში ყოველწლიურად 19% იყო. 2022 წელს შემცირდა საზღვაო ტრანსპორტით ექსპორტის წილი, რაც დსთ-ს ქვეყნებში მთლიანი ექსპორტის 4,7%-ს შეადგენს, რაც 5,9 პროცენტული პუნქტით ჩამორჩება წინა წლის მაჩვენებელს. მიუხედავად იმისა, რომ პანდემიამდე და შემდგომ საქართველოს აქვს აქტიური სავაჭრო ურთიერთობები რეგიონის ქვეყნებთან, რეექსპორტის დიდი ნაწილი, 94%, მიდის დსთ-ს ქვეყნებში, საავტომობილო, შემდეგ კი საზღვაო გზით.

საქართველოს მთლიანი ექსპორტი დსთ-ში წინა წელთან შედარებით 33,3%-ით გაიზარდა, ადგილობრივი ექსპორტი კი 1%-ით შემცირდა. დსთ-ში ექსპორტის ზრდა დიდწილად დაკავშირებული იყო რეექსპორტის ზრდასთან, რადგან ამ პერიოდში რეექსპორტი 76%-ით გაიზარდა. მიუხედავად ადგილობრივი ექსპორტის ზრდისა, რეექსპორტს მნიშვნელოვანი წილი უკავია დსთ-სთან საქართველოს მთლიან ექსპორტში და მისი ცვლილება გავლენას ახდენს საგარეო ვაჭრობის მახასიათებლებზე. შესაბამისად, ცვალებადია თანაფარდობა ადგილობრივ ექსპორტსა და რეექსპორტს შორის, რომელმაც 2022 წელს 0,69 შეადგინა. დსთ კვლავაც რჩება მთავარ სავაჭრო პარტნიორად.

საკვანძო სიტყვები: ექსპორტი, საზღვაო ტრანსპორტი, ანალიზი, სტრუქტურა.

JEL კლასიფიკაცია: C0

Introduction and literature review

In the modern conditions of globalization, the use of correct and effective logistics is becoming more and more relevant, which is one of the powerful levers for the development of trade relations between countries. Globalization, along with technological revolutions in transport sector such as containerisation and multimodalism, has reshaped the maritime industry. (Hussein & Song, DW. , 2022)

At the modern stage liner and tramp shipping are considered as the two major service patterns for international seaborne trade. In concept, liner shipping services have fixed routes and offer port calls at regular intervals, while tramp shipping services have no fixed route and can call at any port for loading and discharging cargo upon demand. (Sahoo, Karamperidis, Song, & Ersoy, 2019) This is where the importance of the right logistics is revealed, because in order to ensure a profitable business, having defined a framework on the integration, we suggest maritime logistics as a meaningful business context for its validation using prevailing cases in the industry. (Palmieri, Parola., Song, & Baglieri , 2019) This line of research is served as an indicator of a good strategic direction for the practitioners engaged in the maritime transport and logistics industry, in order for them to become better integrated entities in a global logistics system as well as maximize their competitive advantages. (Lee & Song, 2015)

In this regard, the use of sea transport is becoming more and more relevant, the share of which is increasing in trade relations. Logistics is actively used in almost all areas of economic activity, and its importance is growing as the country's economy undergoes intensive paths of transformation and development. The usefulness of logistics is determined by the magnitude of the avoidance of expected losses that may arise at a particular time and under a particular market conjuncture. (Abesadze, Abesadze, Robitashvili, & Kinkladze, 2022)

After the end of the Covid-19 pandemic, the agenda was to deepen trade relations using all means of transport, although most of Georgia's trade relations, about 49.3%, come from road transport, while 40.6% by sea as of 2022.

It is known that visitors to the country come mainly by land and air. Cruise traffic capabilities are underestimated, so the scale of its use is uncertain. Clearly, increasing the intensity of cruise traffic will also contribute to the development of cruise tours. To do this, first of all, it is necessary to pay attention to the pilot regions, where the flows of potential visitors can increase. It is necessary to ensure the diversity of cruise tourism products, even in the segment of the domestic tourism market, which should be accompanied by training to provide appropriate services to staff based on training, use of innovative methods of cruise tour business planning, etc. (Abesadze, Kinkladze, R., , Giorgobiani, M., , & Robitashvili, N.,, 2021)

At the modern stage of society development, when in the conditions of the established conjuncture it is necessary to manage the connection between the production and the key market, the correct logistics plays an important role. Among the means of available transport today, maritime transport is relevant and often the most convenient for Georgia. (Abesadze, Abesadze, Robitashvili, & Kinkladze, 2022)

Aim and tasks. The topic of foreign trade statistics is relevant in Georgia, and many studies have been conducted on this issue. But this article focuses on the role of maritime transport in foreign trade relations. Therefore, the main goal of the paper is to outline the trends in foreign trade under the conditions of sea transport and to determine the main parameters. Analysis, synthesis, induction, deduction were used in the research process, as well as specific statistical methods: observation, grouping, and analysis. Among the analysis methods, the mean values, relative values, variation analysis, dynamic sequences, selective observations are worth mentioning. (Abesadze, Abesadze, Robitashvili, & Kinkladze, 2022)

Nowadays the volume of the country's imports is 2.5 times higher than the volume of exports, which means that Georgia still has a historically formed negative trade balance. For the economic growth of Georgia, as a country with an open economy, the increasing rates of foreign trade characteristics are important. As the country is involved in foreign trade and local consumption is not only dependent on local production, but also includes local production of other countries. Accordingly, Georgia has the status of the most open economy in the region. Globally, it ranks 72nd out of 200 economic units in terms of openness. (<https://bm.ge/ka/article/2022-saqartvelos-adgilobrivi-eqsporti/109823>, 2022)

Methodology

In the research process, general (analysis, synthesis, induction, deduction, etc.), as well as specific (observation, gathering-grouping, analysis: average values, relative indicators, dynamic series, selective observation, etc.) statistical methods were used. The data was processed, and the indicators were calculated based on the computer program SPSS. As a result of the calculations, based on crosstab analysis, the research results were formed.

Results

The main trade partners of Georgia are the neighboring countries. China leads the top five export countries, Azerbaijan and Russia have almost the same export figures, followed by Armenia and Turkey.

The geographical structure of importing countries is different. Turkey is the absolute leader here, followed by Russia, the volume of imports from China and the USA is almost equal, while from Germany it completes the top five.

It is interesting how Georgia's foreign trade relations with the CIS countries are. We will focus on export relations, including shipments by sea.

Over the years, the CIS has been and still is one of the major trade partners of Georgia. Its share in the total volume of exports is almost 50%, which was characterized by certain fluctuations in 2016-2022. If at the beginning of the period only 35% of Georgia's total exports went to CIS countries, by 2019 its share increased to 53.8%. The Covid-19 pandemic has slowed the pace of exports to the CIS countries, so despite the increase in exports, the percentage share of exports to the CIS has not come close to the pre-pandemic level.

(see Table 1)

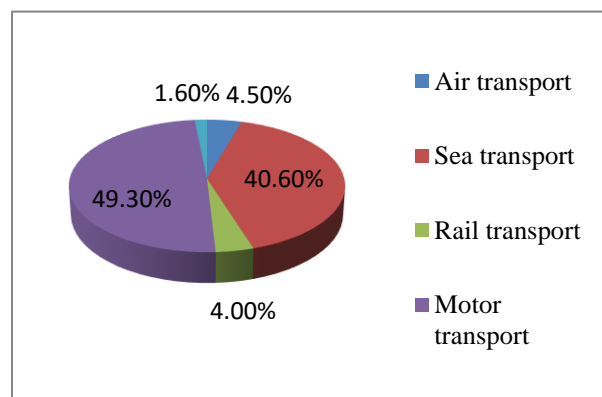
Table 1. Dynamics of the share of total exports to the CIS and exports by sea in total exports, %

	Share of Export to the CIS in total Export	Share of Export to the CIS by Sea transport in total Export
2016	35.0%	4.4%
2017	43.5%	7.7%
2018	50.0%	8.4%
2019	53.8%	9.7%
2020	45.1%	9.5%
2021	47.6%	10.6%
2022	48.2%	4.7%

Source: (National Statistics Office of Georgia, 2022)

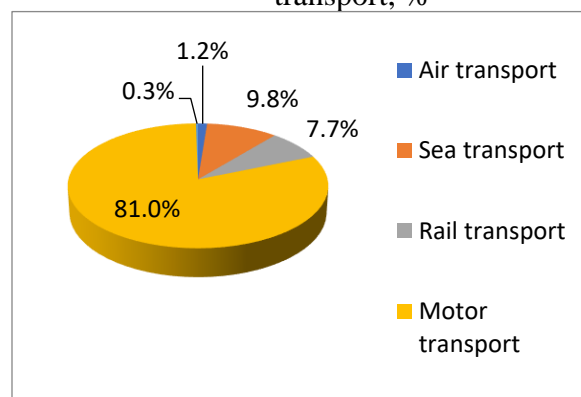
Exports from Georgia are mainly carried out by sea and road transport, whose share in the export transport structure has traditionally been high over the years, and according to the latest data, it was characterized by a share of 49.3% and 40.6%, respectively.

Figure 1. Exports by means of transport, %



Source: (External Trade Portal, 2023)

Figure 2. Exports to the CIS according to means of transport, %



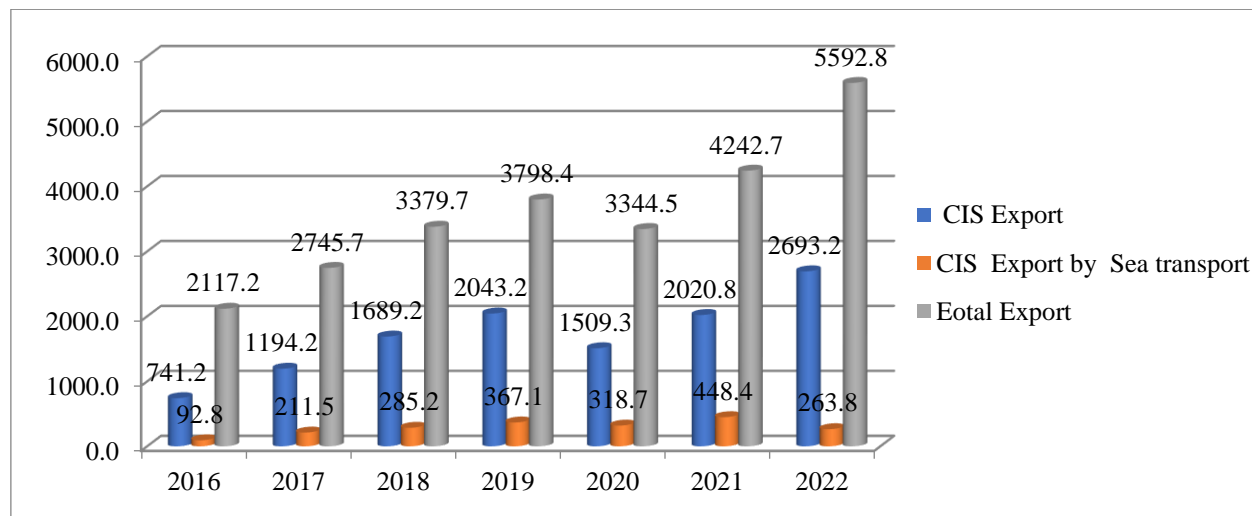
Source: (External Trade Portal, 2023)

Export relations with the CIS are mainly by road (81%). As Figure 2 shows, maritime transport is on the second place with a share of 9.8%.

The foreign trade portal of the National Statistics Service provides the opportunity to create a database from 2016, therefore, the analysis period was determined by these 7 years.

In general, exports from Georgia are characterized by an increasing trend. Before the pandemic and even after the pandemic, there is a trend of growth with the CIS countries, but the area of using sea transport in export relations with the CIS is decreasing slightly.

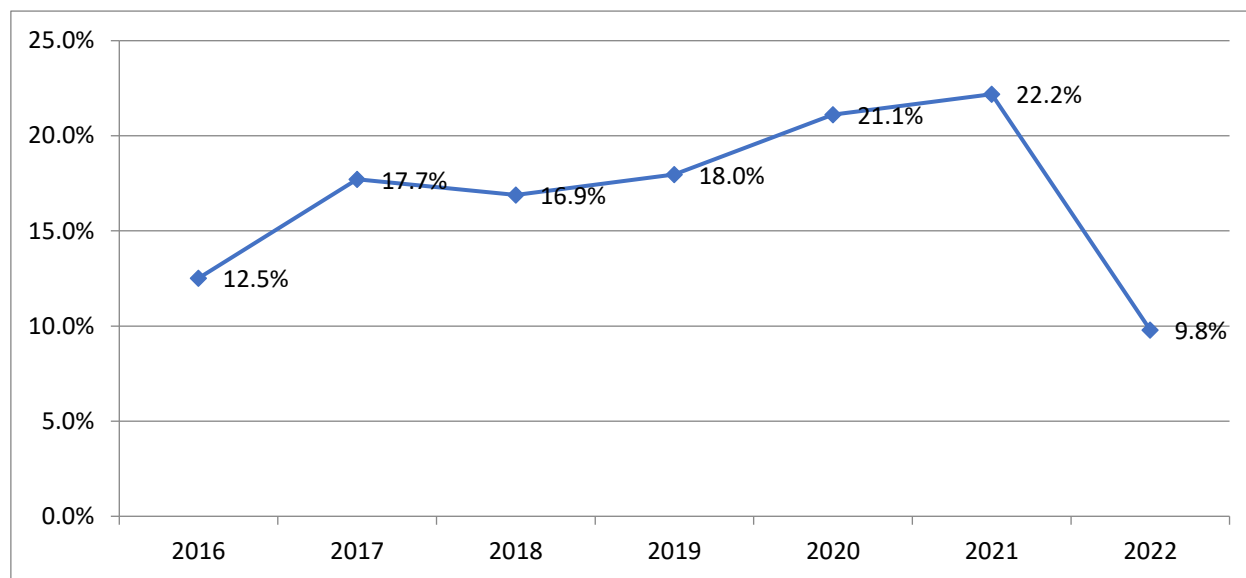
Figure 3. Dynamics of exports to CIS countries and exports by sea in 2016-2022



Source: (External Trade Portal, 2023)

In 2016-2022, the average annual growth rate of exports to the CIS countries amounted to 123.9%, while the increase of exports by sea transport was 19% annually during the same period. But the increasing trend of the share of exports by sea in 2022 was replaced by a sharply reduced figure in recent years. In 2022, it worsened by 12.4 percentage points and amounted to 263.8 million US dollars. Accordingly, the share of exports by sea transport also decreased.

Diagram. 4. Dynamics of the share of export by sea in the total export with the CIS countries



Source: (National Statistics Office of Georgia, 2022)

The percentage share of exports to the CIS is variable, ranging from 35% to 53.8%, and the range of variation in 2016-2022 was 18.8%. Additionally, the share of goods exported by sea in the CIS countries was 4.7% of the total export, which is 5.9 percentage points lower than last year. (see Diagram 4.)

It should be noted that the commodity structure with the CIS countries did not change substantially during the research period. Traditionally, light vehicles, natural grape wines, ferroalloys, mineral and fresh waters, non-denatured ethyl alcohol with an alcohol concentration of less than 80 vol.%, alcoholic beverages, packaged medicinal products, waters, including mineral and damaged ones, containing sugar additives, cigars and cigarettes made of tobacco or its substitutes, fresh or dried citrus fruits and others leave the country mainly by sea.

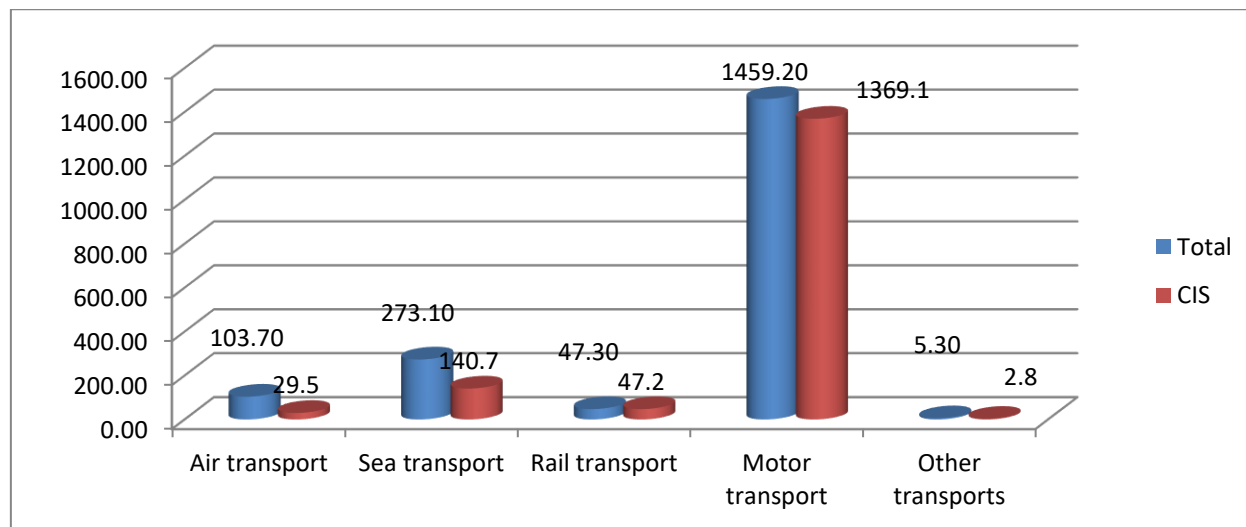
Table 2. Commodity structure of sea exports to the CIS countries in 2022

Motor cars	122885.84
Ferro-alloys	82539.89
Mineral or chemical fertilizers, nitrogenous	13037.06
Petroleum and petroleum oils	11941.81
Undenatured ethyl alcohol, spirits, liqueurs and other spirituous beverages	11324.43
Wine of fresh grapes	5728.70
Waters, natural or artificial mineral and aerated waters, not containing added sugar	3979.40
Copper waste and scrap	2665.19
Machines and mechanical appliances having individual functions	1835.47
Electric instantaneous or storage water heaters, space and soil heating apparatus	1310.70
Motor vehicles for the transport of goods	1250.69

Source: (National Statistics Office of Georgia, 2022)

Despite the fact that before and after the pandemic, Georgia has an active trade relationship with the countries of the region, part of the imports leaves the country in the form of re-exports. As shown on the diagram, a large part of re-exports, 94%, goes to the CIS countries, by road and then by sea.

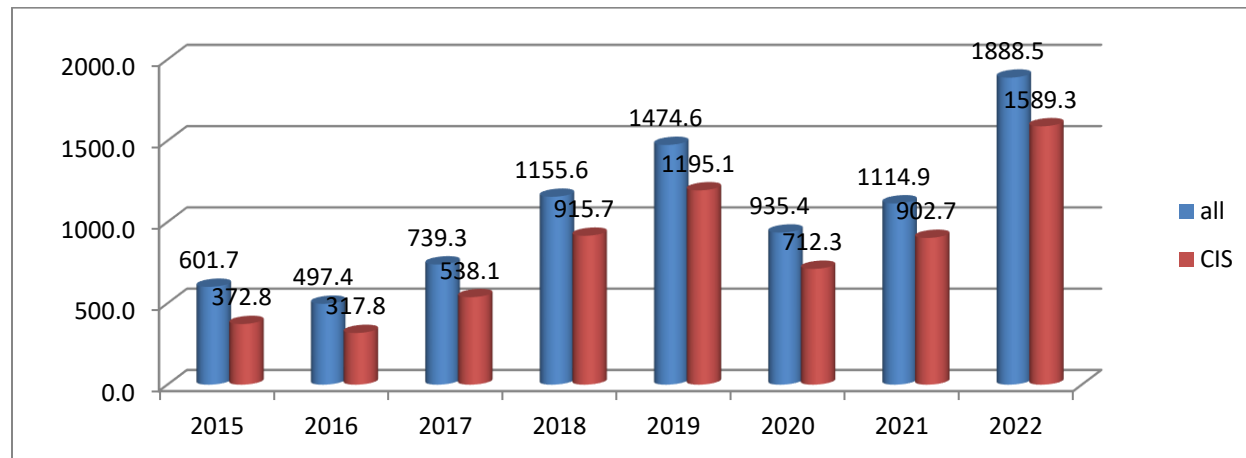
Diagram 5. Re-export according to means of transport, million. USD



Source:(National Statistics Office of Georgia, 2022)

The largest rate of re-export was recorded in 2022, which exceeded the pre-pandemic rate by 28%, and the rate of increase in the same period with the CIS countries was 33%. During the last eight years, the range of chain growth rates of re-exports generally varied between 19% and 69%, and in re-exports with CIS countries between 27%-69%.

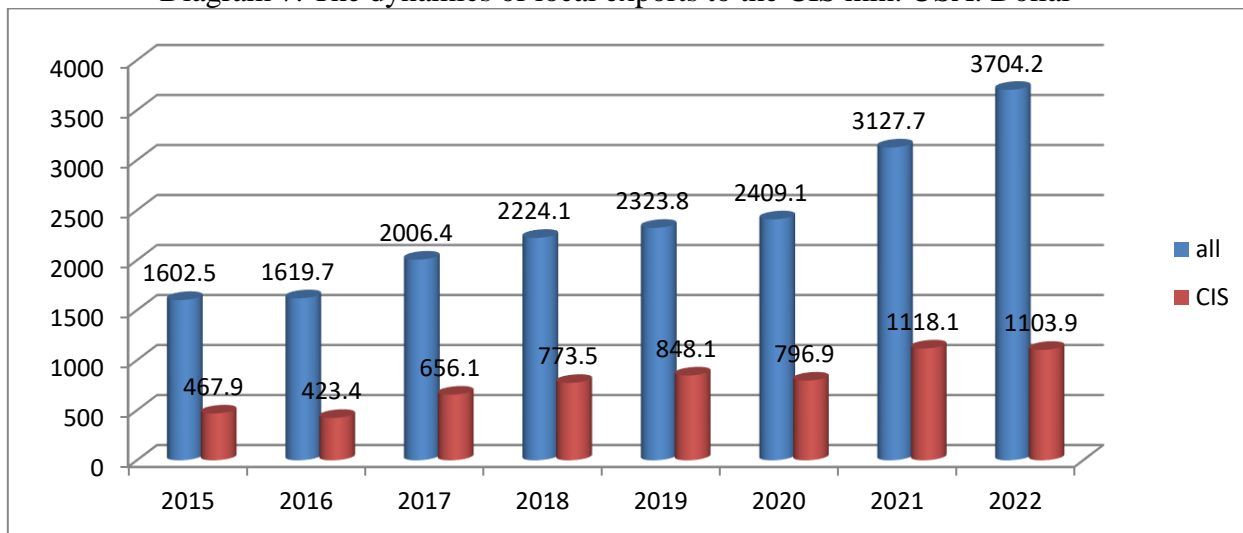
Diagram 6. Dynamics of CIS-CIS re-exports million US dollars



Source:(National Statistics Office of Georgia, 2022)

If before the pandemic, the value of goods and services exported from Georgia in 2022 was 5,592,764.97 thousand US dollars, of which only 33.8%, 1888582.82 thousand US dollars were local exports. The volume of exports to the CIS in the same period amounted to 2,693,209.31 thousand US dollars, of which 1103,950.24, or 41%, were local exports. (see diagram) Georgia's total export to the CIS increased by 33.3% compared to the previous year, while local export decreased by 1%. The increase in exports to the CIS was largely related to the increase in re-exports, because in this period re-exports increased by 76% and amounted to 1589259.07 thousand US dollars.

Diagram 7. The dynamics of local exports to the CIS mln. USA. Dollar



Source: (National Statistics Office of Georgia, 2022)

Ferroalloys, fertilizers, mineral or chemical, nitrogenous, natural grape wines, mineral and fresh waters, waste and scrap of copper, nuts and other nuts, motors and generators, including mineral and damaged ones, containing sugar additives are mainly exported to CIS countries as local exports. Ginger, saffron, thyme, bay leaf, curry and other spices, etc.

Table 3. Commodity structure of local exports. (thousands of US dollars)

Export products	Volume
Ferro-alloys	702121.25
Undenatured ethyl alcohol, spirits, liqueurs and other spirituous beverages	186413.77
Waters, natural or artificial mineral and aerated waters, not containing added sugar	140868.40
Mineral or chemical fertilizers, nitrogenous	133727.39
Wine of fresh grapes	132924.46
Copper waste and scrap	38537.38
Hazelnuts and other nuts	13333.66
Citrus fruit, fresh or dried	11933.58
Ginger, saffron, turmeric, thyme, bay leaves, curry and other spices	8081.51
Other fruit, fresh	7328.68

Source: (External Trade Portal, 2023)

The main re-exports to the CIS countries are passenger cars, oil and petroleum products, machines and mechanical equipment for special purposes, trucks, electric water heater treatment means, packaged mineral and fresh waters, undenatured ethyl alcohol with an alcohol concentration of less than 80% by volume, alcoholic beverages, buckwheat, millet and other cereals, motorcycles and bicycles, with or without carriages, etc. (See Table 4)

Table 4. Commodity structure of re-exports to CIS countries, thousand US dollars

Re-export products	Volume
Motor cars	122885.84
Petroleum and petroleum oils	11782.44
Machines and mechanical appliances having individual functions	1835.47
Motor vehicles for the transport of goods	1250.69
Electric instantaneous or storage water heaters, space and soil heating apparatus	1242.24
Medicaments put up in measured doses	397.28
Waters, natural or artificial mineral and aerated waters, not containing added sugar	333.65
Undenatured ethyl alcohol, spirits, liqueurs and other spirituous beverages	143.67
Buckwheat, other cereals	127.26
Motorcycles and cycles fitted with an auxiliary motor; side-cars	126.29
Cigars, cheroots, cigarillos and cigarettes	121.50

Source: (External Trade Portal, 2023)

As shown on the table, despite the growth of local exports, re-exports have a significant share in the total exports of Georgia with the CIS, and its change affects the characteristics of foreign trade. Compared to 2015, although the share of local exports in total exports to the CIS has increased (in this period, the range of variation is between 29.1%-35.8%), but its share is still low. Accordingly, the ratio between local export and re-export is variable, which is equal to 0.69 by 2022.

Conclusions

- CIS is one of the major trade partners of Georgia;
- Export relations with the CIS are mainly carried out by road (81%), the share of maritime transport in total exports with the CIS is small (9.8%);
- In 2016-2022, the average annual growth rate of exports to the CIS countries amounted to 123.9%, although the increase of exports by sea transport was 19% annually in the same period, in 2022 the share of exports by sea transport decreased, which made up 4.7% of the total export to the CIS countries. And that is 5.9 percentage points lower than the previous year's figure. According to the latest data, the volume of local exports with the CIS is also decreasing;
- It should be noted that a large part of re-exports, 94%, goes to the CIS countries, by road and then by sea;
- Compared to the previous year, the volume of local exports decreased;
- It is worth mentioning that the commodity structure with the CIS countries did not change substantially during the research period. Traditionally, light cars, natural grape wines, ferroalloys, mineral and fresh waters, etc. are exported from the country.

References

- Abesadze, N., Abesadze, O., Robitashvili, N., & Kinkladze, R. (2022). Impact of Maritime Logistics on Statistical Characteristics of Foreign Trade Indicators of Georgia. *Economics. Ecology. Socium. Vol.6, Issue 3*, 1-9.
- Abesadze, N., Kinkladze, R., Giorgobiani, M., & Robitashvili, N., (2021). The main challenges of cruise tourism and statistics of expectations in Georgia. *ISTSML 2021* (pp. Volume 339. EDP Sciences. pp.1-8). Batumi: MATEC Web of Conferences.
- de Andres Gonzalez, O., Koivisto, H., Mustonen, J. M., & Keinänen-Toivola, M. M. (2021). Digitalization in just-in-time approach as a sustainable solution for maritime logistics in the baltic sea region. *Sustainability*, 13(3), 1173.
- Hussein, K., & Song, D. W. (2022). Maritime Logistics for the Next Decade: Challenges, Opportunities and Required Skills. *Global Logistics and Supply Chain Strategies for the 2020s: Vital Skills for the Next Generation*, 151-174.
- Lee, E., & Song, D. (2015). The effect of shipping knowledge and absorptive capacity on organizational innovation and logistics value. *The International Journal of Logistics Management*.
- Palmieri, A., Parola, F., Song, D., & Baglieri, E. (2019). Integrating firms in a complex network: evidence from maritime logistics. *International Journal of Logistics Research and Applications*, 64-77.
- Sahoo, S., Karamperidis, S., Song, D., & Ersoy, E. (2019). A Contemporary Approach for Defining Shipping. | ATHENS, GREECE: IAME 2019 CONFERENCE.
- <https://bm.ge/ka/article/2022-saqartvelos-adgilobrivi-eqsporti/109823>. (2022). Retrieved from saqartvelsos adgilobrivi eqsporti.
- National Statistics Office of Georgia. (2022). Retrieved from <http://ex-trade.geostat.ge/en>.
- National Statistics Office of Georgia. (2022). Retrieved from <http://ex-trade.geostat.ge/en>.
- External Trade Portal. (2023). Retrieved from <http://ex-trade.geostat.ge/en>.