Abstract: Proper management of logistics systems in the 21st century is one of the most important prerequisites for business development. In the modern post-covid period, against the background of the hostilities between Russia and Ukraine, the sanctions imposed by the West on Russia, the cancellation of the visa regime by the Russian Federation with Georgia and the restoration of air traffic allowed Russian citizens to enter European countries through Georgia, which further increased the transit attractiveness of Georgia. The study of the specifics of logistics systems management, the detection of existing problems in this field was on the agenda.

The purpose of the research is to study the specifics of the transit-logistics corridor of Georgia, to study the challenges in this field and to search for ways to solve them. In this article, based on the review of various literary sources, the main issues of management of the logistics system of Georgia are analyzed.

In this article, the methods of analysis, synthesis, collection and grouping of materials were used, on the basis of which the transit potential of Georgia was identified and the ways of its implementation were determined.

As a result of the research, the factors hindering the sustainable development of the logistics system of Georgia were identified, the elimination of which will help to increase the competitiveness of the logistics system of Georgia and the qualification level of the personnel employed in them.

In order to eliminate the challenges in the logistics systems of Georgia, we have developed recommendations, the consideration of which will significantly improve the management mechanism of modern logistics systems.

Keywords: management of logistics systems, delivery of cargo flows, transit potential, coordination of logistics nodes.

JEL classification: L91, R41, R42
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ლოჯისტიკური სისტემების მართვის პრობლემები თანამედროვე ბიზნესში

ამბიცია: ლოჯისტიკური სისტემების სწორი მართვის თანამედროვე ბიზნესის განვითარების ერთ-ერთი უნდა, რისკი შეიძლება საკმაოდ მაღალი გაქრის შემთხვევაში და აღარ როგორც სხვა კომპანიებში. ჩვენი მიზანი იყო იშვიათი ფუნქციონალური ვიზია მართვის ხელშემოწმებით. მაგალیა საკითხი სერიოზული და საბუთო ზიანის გაძლიერება. ეს არ ენიჭება მაღალი ან დასრულებული მართვის პოტენციალი. ზოგ მხრივ, როგორც ჩვენი განგრენამდე, ის უზრუნველყოფს საქართველოს ლოჯისტიკურ სისტემაში მართვის ხელშეკრულება და ვარიანტები.

კვლევის შედეგად გამოვლინდა დაქვემდება საქართველოს ლოჯისტიკური სისტემის მდგრადი განვითარების ხელშეკრულება და ჭრილის გამოწვევა, რომელიც აღმოსავლეთ იქნება, შექმნილი სისტემა მართვის სეტყვური განვითარების თანახმად, რომელთაგან რამდენიმე საქართველოს ლოჯისტიკური სისტემის კონკურენციური ამაღლების ჭრილი.

კენლექტი : ლოჯისტიკური სისტემები, მართვის ხელშეკრულება, კუთვნილები, ხელშეკრულება, ლოჯისტიკური სისტემები, ხელშეკრულება, განვითარების დაქვემდება, კონკურენციური ამაღლები.

JEL კლასიფიკაციი: L91, R41, R42,
INTRODUCTION AND REVIEW OF LITERATURE

Introduction.

In May 2023, after the cancellation of the visa regime imposed by the authorities of the Russian Federation for Georgia and the restoration of air traffic, the issue of launching new routes of the Europe-Caucasus-Asia transit corridor became relevant, where Georgia will occupy a strategically important place on the renewed "Silk Road" route. In such conditions, it is very relevant to study the specifics and challenges of managing the logistics system of Georgia in the field of modern business development. In particular, due to the start of hostilities by Russia against Ukraine and the imposition of sanctions against Russia by the developed countries of the West, the interest of Central Asian countries rich in natural resources in Georgia has increased.

In such conditions, Georgia has a chance to take the place of the main logistics conduit among the alternative transcaucasian transit channels connecting the European and Asian regions. It is important that the Government of Georgia adequately respond to the demands and challenges created in the field of logistics systems, reduce the administrative barriers imposed in this field and increase the transit capacity of Georgia.

The purpose of the study is to study the specifics of the functioning of the Transcaucasian transit-logistics corridor through Georgia, to examine the challenges in this field and to find ways to solve them. Statistical methods of information collection, grouping and analysis were used to achieve this goal. The correct determination of the place of the logistics system of Georgia in the logistics corridor of Eurasia will help to activate the transit potential of Georgia in the new reality.

The hypothesis of the study is that if Asian companies consider it appropriate to send their goods to Europe via Georgia, and if European companies prefer to send their goods to Asia in the opposite direction via the same route, then Georgia will occupy the main logistics location between the European and Asian regions.

The methodological basis of the paper is the works of Georgian and foreign scientists in the field of management of logistics systems of modern business. Our research is based on methods of data collection, grouping and analysis. In the paper, the specifics of modern Georgian logistics systems management are studied using quantitative and qualitative research methods. Georgian and foreign scientists have developed many works on the management of logistics systems in Georgia, but their research is mainly focused on the possibility of restoring the historical "Silk Road" of Georgia. The shortcoming of their research is that, in their opinion, the success of the logistics system of Georgia as a small country depends on its geographical location, the complex development of many interrelated events in the international logistics chain. They argued that the geographical transit location is a sufficient condition for the country to become a logistics center.

The potential usefulness of the proposed research lies in the fact that the problems and specifics of the management of the logistics system of Georgia are discussed in the new reality, in the context of the ongoing hostilities between Russia and Ukraine.

Review and understanding of relevant literature

Consider the opinion of some foreign researchers about the problems and specifics of managing logistics systems in modern business. For example, In 2020, Georgian scientists Badri Gecbaia and Amiran Tsilosani published a paper “Overview of Eurasian Transport Corridors, Global Development Strategies and Economic Association Initiatives” in the International Scientific Journal “Innovative Economics and Management”. In the present paper is discussed the represented transport corridors in the Caucasus and Eurasia regions, which are one of the important levers in the Eurasian region to increase
the economic interests and the spheres of their influence of the major players in the region, such as the European Union, China, Russia and Iran. “Historically Georgia is associated with the “Silk Road” transport corridor, which connected the Asian and European countries by its geographical location. “Silk Road” transport corridor did not lost its actuality even during the last decades. This is proved by development of small and large-scale transport corridors in the Eurasian region being implemented and planned by different countries at different times, signing new cooperation agreements and forming associations that are part of the historic “Silk Road” route (Gechbaia B., Tsilosani A. 2020: 95).

Georgian scientists Nato Jabnidze, Badri Gechbaya and Leila Tsetshtladze in the work "Regional Aspects of Logistics System Competitiveness" point out that "regional characteristics of reproduction affect the development of the country's logistics system". It is especially relevant to take into account the regional peculiarities of the formation of the logistics system of Georgia. The unique combination of socio-economic and natural-climatic factors in the region determines the supply and demand of products, price policy, specificity of activities of logistics intermediaries and other regional characteristics" (Jabnidze, Gechbaya, 2022: 94).

Georgian scientist Vakhtang Tavberidze in the work "Why Ships Sink So Often - The Human Factor in Maritime Safety”, notes that “The article analyzes the extremely important question in the modern maritime industry as to why, what factors cause ships to sink, what are its underlying causes. Analyzed by years of unfortunate experience in a century of ultra-modern technology and aerospace materials, ships are still sinking. Modern cruise liners are much larger than they have ever been” (Tavberidze, 2021: 92).

Georgian researchers Tamta Varshanidze, Salome Japaridze and Lasha Manvelidze in their work “Possibilities of formation of maritime transport clusters and its role in economic development” They note that “There are advantages of creation marine clusters in Ajsara 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” (Varshanidze, Japaridze, Manvelidze 2022: 72).

Ukrainian scientists Iryna Fedotova and Nadiia Bocharova in their paper „A systematic approach to multilevel supply chain modeling based on cybernetic modeling of viable systems“, notes that „The article discusses the structure and levels of supply chain formation as a logistics system from a systemic approach perspective. This allows coordinating material and other flows in the supply chain, providing viable means of development and maintaining long-term business relationships, and achieving synergistic effects from the interaction between system links. Flows in this system are formed into a logistics chain, which generally combines producers, intermediaries, carriers, and consumers.“ (Fedotova, Bocharova, 2023: 130).

American scientist E. Frazell in his work "Supply Chain Strategy: The Logistics of Supply Chain Management" notes that "correct management of logistics systems helps a country improve its logistics situation in terms of openness and transparency of information, which will help identify critical problems." (Frazelle, 2022).

German scientist S Winkelhaus, in his paper „Logistics 4.0: a systematic review towards a new logistics system“, notes that „In modern logistics systems, managerial skills can be used to identify future business strategies and technologies to perform certain logistics tasks.“ (Winkelhaus, 2020).

Ukrainian scientists - I. Vakhovich and I. Kryvovyazyuk in the work "Using information technology for risk management of logistics systems" notes that "risk management in logistics systems will increase the sustainability of logistics systems, their throughput. Having information about these risks is useful for improving the management of logistics systems" (I. Vakhovych, I. Kryvovyazyuk, 2021).
Serbian scientists - MA Milenkov, VS Sokolović and VR Milovanović in their work "Logistics - its role, importance and approaches", they note that "the complex development of logistics nodes and their use in the field of transit requires specialized, highly qualified knowledge". (MA Milenkov, VS Sokolović: 2020)

Thus, as can be seen from the analysis of the studies carried out so far by Georgian and foreign researchers on the role of management of the modern logistics system, it is possible to solve the challenges in modern business in case of proper management of logistics systems. According to them, logistics systems management has a key role in the successful development of modern business. In their works, the specifics of logistics systems management and aspects of competitiveness are reviewed in detail. Similar studies of logistics systems will create a favorable prerequisite for the development of modern business so that the country can take its proper place in the region.

In the works of Georgian scientists, the challenges and specifics of managing logistics systems in modern business are studied in detail, during the study of which, Georgian and foreign scientists came to the conclusion that the logistics system of Georgia needs further improvement, introduction of technological innovations. As it turns out, the demand for Georgian transport companies has increased.

Our vision in this paper, in contrast to other scholars, is to examine the possibilities of improving the management of the logistics system of Georgia in the modern, post-Covid period, against the background of hostilities and imposed sanctions between Russia and Ukraine. The West puts on the agenda the need to adapt Georgia's logistics system to the new environment. The previously unsolved problem of logistics system management in Georgia's modern business, to which the article is devoted, is the discovery of new opportunities for Georgia in the transit-logistics corridor connecting Europe and Asia, so that Georgia can fully realize its transit potential.

**METHODOLOGY**

The methodological basis of the work is the scientific-intellectual studies prepared by Georgian and foreign scientists in the field of logistics systems management. The work is built on the appropriate base of research of theoretical concepts and ideas in the field of management of transport logistics systems. Statistical research methods used in the research of the paper, which correspond to the direction of research in the field of transport and logistics.

**RESULTS**

**Challenges of logistics systems management in modern business of Georgia**

The development and management of the logistics system of Georgia is significantly influenced by the regional features of the current processes in European and Asian countries. It is especially relevant for Georgia to take into account the regional specifics of logistics system management. The radical mutual difference between the socio-economic and natural-climatic conditions of the European and Asian regions, the unique coordination of the supply of products produced in these regions and the demand for them led to the development of interconnected transit-logistics corridors, a change in the price policy, the activation of logistics intermediaries and an increase in the transit of Eurasian regional cargo flows through Georgia.

The specificity of Georgia's logistics systems management is determined by the transport communications established between European and Asian regions, the activities of transport companies, the existence of logistics intermediaries, the state of infrastructure and the production-technical base of regional distribution systems. An important specificity of logistics systems management in modern business is their reliability, stability and adaptability, which are aimed at supporting the balance of the system in the conditions of uncertainty of the external environment.

In the modern business of Georgia, the process of managing logistics systems is complicated by such factors as the lack of information about those wishing to transit cargo through Georgia, the large number of logistics intermediaries, the variety of cargo flows, and others. The competitiveness of
Georgia's logistics systems significantly depend on its position in the global logistics supply chain. However, the challenges of managing logistics systems in modern business can be solved using a horizontal integration strategy with minimal risks. During the strategy of vertical integration of logistics systems management, companies should use such methods that correspond to the strategic approaches to the development of the economy of the European and Asian regions.

During the strategic management of Georgia's logistics systems, it is necessary to use a qualitatively new model, which is due to the ongoing systemic changes in the global logistics chain and the need for innovative development of the country. This will contribute to deepening the integration of Georgia with the European Union and raising the level of competitiveness of its economy. Finding and using the right levers for managing logistics systems in modern business is one of the important contributing factors to the development of the Georgian economy, which is due to its geopolitical location and Georgia's potential to play a special role in the Transcaucasian corridor. In such conditions, it is important to consider the specifics of logistics systems management. In this regard, special attention is paid to the study of the problems of fully using the transit potential of Batumi Sea Port.

The modification of the transport-logistics corridor between the European and Asian regions, which is due to the hostilities between Russia and Ukraine, is an important prerequisite for increasing the role and importance of the logistics system of Georgia, as it has a real opportunity to transport and process additional cargo. Fast, secure exchange of European and Asian goods helps businessmen reduce costs and attract new customers. All this creates favorable conditions for revenue growth and strategic development of modern business. But the opportunities to increase the competitiveness of Georgia's logistics systems are hindered by factors hindering the growth of their management efficiency. In modern business, logistics systems management functions are implemented to create a transport service model and are based on a schedule of rational transport routes for delivery. Georgia is the most convenient route for organizing European and Asian cargo shipments, which allows cargo owners to efficiently use Georgia's transit and logistics channels.

Management of the logistics system in modern business consists of several main stages: choosing the method of transportation; choosing the type of transport; choosing a vehicle; selection of carriers and logistics partners for transportation; Optimization of transport process parameters. A combination of different types of vehicles together with warehouses creates a logistics system. The logistics system of the country consists of the following components: carrier and transport-forwarding activities; design, construction, repair and maintenance of railways, roads, pipelines, structures; works related to the maintenance of navigation hydraulic facilities, water and air routes; Research of processes related to the production of vehicles and other activities.

In modern business, the choice of the type of transport depends on such tasks of managing logistics systems as creating the optimal level of stocks, storage, packaging, etc. The optimal type of transport is chosen based on obtaining information about different types of transport. Due to its geopolitical location, Georgia will acquire the following advantages: the time of delivery of material resources, transportation costs, costs of material resources, the need for additional financial resources, the number of vehicles are reduced; Production productivity, turnover of working capital increases.

In modern business, it is crucial to use certain technical and operational parameters to manage logistics systems. These are: for rolling stock: regulation of technical and operational speed; overall dimensions of containers; engine power of power plants; General dimensions of trailer, semi-trailer load capacity. The use of the following technical and operational parameters is crucial for communication lines: bandwidth; road width, depth; Allowable road load. For terminal management: number of storages; rotation speed; Production of crane-transport and warehouse equipment, etc. In modern business, a special place in the management of the logistics system is occupied by road transport, which is the most
flexible and mobile component of the transport complex. Without road transport, it is practically impossible to implement modern logistics technologies, for example, meeting deadlines and others.

Consider modern methods of managing logistics systems:

- **Use of specialized organizations**, which allows the company to limit the range of goods produced in one place. As a result, the company will receive savings due to an increase in the scale of production;

- **Centralization of supply**, which is due to globalization. Companies are trying not only to more rationally place their products in fewer factories, but also to consolidate inventories and concentrate on fewer locations to reduce inventories. Many enterprises are deliberately closing their warehouses and turning them into regional wholesale bases serving large areas;

- **Postponement and localization**, which allows to take into account the requirements of specific buyers when delivering products to customers. In the global world, there are many options for conducting international trade: from the traditional focus on export-import operations to the implementation of the "state enterprise" concept. In other words, there is no universal model for managing international logistics operations, nor can there be, each enterprise must look for an individual solution when managing its own logistics operations.

  From this point of view, we can generalize the experience of successful corporations:

  - Finished products are sold all over the world, while material and technical supply and production are concentrated in one center (mainly in one's own country);
  - Production is organized in one center (most often in own country), but raw materials and semi-finished products are supplied from many countries;
  - The main production is concentrated in one country (usually the host country), and the subsequent recruitment and pre-sale services - in other countries;
  - The agricultural entity is registered and operates as a national company, which produces a significant share of the purchase of basic materials on local markets;
  - A network of completely independent organizations is created, which buy raw materials from local markets and supply the market with finished products.

  Globalization of the world economy in modern business requires proper management of logistics systems. Enterprises from different countries are entering the world market, which is driven by the desire to grow the key market. Expanding trade between Europe and Asia requires appropriate logistics services.

  In case of correct management of the transit-logistics system of Georgia, the barriers in the transit activities of the transport companies of Georgia will be removed, although there are still serious barriers in the way of the development of the logistics system of Georgia. Many trade, financial, customs and other restrictions are caused by different political systems, socio-economic conditions, differences in the living standards of the population, etc., of the countries included in the Eurasian corridor. There are barriers between the member states of the European Union and the republics of the former USSR, between the European Union and Russia, between the European Union and the countries of Central Asia, etc. All this should be taken into account when managing the logistics system of Georgia.

  fig. It can be seen from 1 that the existing barriers in managing the logistics system of Georgia are divided into market (competitive), financial and distribution barriers. Market (competitive) barriers to entering European and Asian countries are market entry restrictions (legislative barriers, technical obstacles for importing goods); insufficient availability of information; Peculiarities of pricing; established competition rules, etc. Financial barriers to the transit of Eurasian goods through Georgia are: exchange rate fluctuations; potential advantages of foreign trade; effective management of the logistics system of Georgia; customs procedures of trading countries; Peculiarities of economic policy of the states, etc. Distribution barriers are related to the institutional infrastructure, the different functioning of
the national bank, insurance companies, legal consultants, transport companies and other support facilities. (Pataraia, 2019: 23).

Figure 1. Barriers in the development of international logistics, which affect the logistics management of Georgia

![Diagram of barriers in international logistics]

Source: [https://openscience.ge/bitstream/1/343/1/samagistro%20pataraia.pdf](https://openscience.ge/bitstream/1/343/1/samagistro%20pataraia.pdf)

The interstate specificity of the distribution channels within the transport corridor between Europe and Asia hinders the development of the logistics system of these two regions. It is necessary to overcome the problems of standardization, which is caused by the national and regional peculiarities of means of transportation, railway infrastructure, cargo handling equipment. The International Organization for Standardization (ISO) works in this direction, which has achieved some success in the unification and standardization of transport equipment (containers, pallets, their transport vehicles).

As can be seen from the above analysis, in the 21st century, logistics systems are one of the driving forces promoting business development. At the modern stage, in the post-Covid period, against the background of hostilities between Russia and Ukraine and the sanctions imposed on Russia by the West, it is necessary to properly manage the logistics system of Georgia, to adapt it to the new environment. This will make it easier to study the challenges in the field of functioning of the transcaucasian logistics corridor through Georgia and find ways to solve them. Establishing the correct vision of logistics systems management is one of the main prerequisites for promoting business development.

Studying the challenges of logistics systems will create new opportunities for business development in Georgia, create prerequisites for increasing economic benefits from business. Determining ways to solve logistics systems management problems will help free up financial, material and human resources to generate innovative ideas. The cancellation of the visa regime previously imposed by the Russian Federation for Georgia and the restoration of air traffic have further increased the transit and logistics attractiveness of our country, as Russian citizens will be able to travel to European countries through Georgia. After the restoration of air traffic, in the light of the imposition of sanctions against Russia, the expansion of the Europe-Caucasus-Asia transport corridor through Georgia was on the agenda of the Georgian government.
Against the background of the prohibition of direct flights to Russia by European countries, the trend of increasing dynamics of Russian citizens traveling to Europe through Georgia creates a new perspective for the country to occupy a strategically important place in the air transit corridor connecting with Russia. But this perspective, on the other hand, creates a danger that Georgia will be included in the list of sanctioned countries. Accordingly, Georgia will occupy a strategically important place among the alternative options of the renewed "Silk Road" routes. (See Figure 2). As shown in Figure 2, products from Azerbaijan, Afghanistan, Tajikistan and China will be transported to Europe via the New Silk Road, while products from Greece and other European countries will be transported to Asia (in the opposite direction) via Georgia.

Against the background of the disruption of the cargo supply chain between Russia and Europe, the prospect of the formation of the "Middle Corridor" has become real, which further increases the logistical attractiveness of Georgia to transport Central Asian cargo to the West. In such conditions, it is very relevant to study the specifics of managing the logistics systems of Georgia in order to increase the transit capacity of our country. (See Figure 3). As shown in Figure 3, products from Azerbaijan, Kazakhstan, Uzbekistan, Kyrgyzstan and China will be shipped to Europe via the Middle Corridor, while European products will be shipped to Asia in the opposite direction via the same route.

Due to the start of hostilities by Russia against Ukraine and the imposition of sanctions against Russia by the developed countries of the West, the countries of Central Asia rich in natural resources - Kazakhstan, Uzbekistan, Turkmenistan and others - have increased the transit of their goods through Georgia to Europe. In such conditions, Georgia has a chance to acquire the role of the main logistics channel in the alternative transcaucasian transit corridor connecting Europe and Asia, but here it should be taken into account that in the transcaucasian logistics chain connecting Europe-Asia, Georgian transit companies are less competitive than Azerbaijani, Iranian and Russian carriers. The latter, at the expense of their own cheap oil products, offer shipping services to cargo owners at a much lower price than Georgian transport companies. In order to increase the competitiveness of Georgian shipping companies, it is necessary to: 1. Complicate the system of issuing permits for the activities of foreign shipping companies, increase administrative barriers; 2. Perfection of connections between separate links of the

Figure 2. A new vision of the Silk Road

Source: https://iberiamagazine.com/axali-abreshumis-gzis-iniciativa/
logistics chain of transport systems of Georgia; 3. Correct management of logistics systems of Georgian transport companies.

Figure 3. Georgia's place in the "Middle Corridor"

Current changes in the Eurasian supply chain can turn into a new opportunity for Georgia to rationally use its geo-economic location. For such a small country as Georgia, success in the Eurasian logistics system depends on the development of interrelated processes in the countries of this region. But in modern business, only a geographically transit location does not guarantee that a country will become the central core of the logistics system. The significant and rapid changes taking place in the Eurasian chain of the global logistics system can be used by the Government of Georgia as an opportunity to make the most of its geographical location in the process of transporting Asian and European cargoes.

CONCLUSIONS

Thus, in the conditions of globalization and internationalization of the world economy, where the correct management of logistics systems is extremely important in the field of reducing business costs and increasing economic benefits in modern business, the present study has great theoretical and practical significance. The theoretical importance of the paper lies in the fact that the results of the research conducted during its development can be used by students, masters, doctoral students and professors to deepen and improve their knowledge in the field of logistics management. The practical value of the article lies in the fact that the recommendations given in the final part of the study can be used by relevant state bodies that regulate the movement of transit cargo.

In particular, in order to improve the management of the logistics system of Georgia and increase its competitiveness, the government should implement the following measures:

1. The country's government should adequately respond to the challenges of transit systems, further reduce transport tariffs in this area and increase Georgia's transit capacity;
2. The Government of Georgia should monitor the current processes in the supply network of the logistics systems of the grand regions of Europe and Asia and use these processes correctly;

3. The authorities should determine the competitive advantages of the logistics system of the country and the possibilities of their implementation;

4. The government should promote the introduction of relevant information technologies in Georgian logistics companies in order to increase their competitiveness;

5. The state should facilitate the coordination of cargo transportation between individual entities included in the logistics systems of Georgia.

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