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RISK MANAGEMENT STRATEGY AND METHODOLOGY OF THEIR ANALYSIS IN LOGISTICS OF KAZAKHSTAN

Abstract

The purpose of this article is to highlight an important topic for the developing logistics complex of Kazakhstan. The study of risk management strategies and their implications is a fundamental tool in choosing the shortest and most efficient way to develop the economy of Kazakhstan. The author proposes his personal view on the problems of risk management in Kazakhstan and possible solutions. The article is intended to supplement the existing body of knowledge in this scientific segment, thus highlighting the importance of the studied topic. The logistics industry of Kazakhstan is on the threshold of exploring various modern methods of management and business processes. The development of strategies of anti-crisis measures will prevent stagnation in the development of the industry. In parallel, the author compares the studied material with real logistics processes and events in Kazakhstan. Conducting work on mistakes is the first step in self-development. The article seeks to identify, classify risks, outline strategies to minimize the likelihood of their occurrence and, if they do occur, minimize the consequences.The conclusions of the study include recognition of the fact of imperfection in some cases of anti-crisis policy of Kazakhstan, which led to the adoption of ill-considered decisions that lead to undesirable long-term consequences. The author also considers priority, in the author's opinion, ways to develop the logistics industry in Kazakhstan.

Key words: transport logistics, risk management, risk management strategies, SWOT analysis, data analytics, vehicles, control.

Introduction

Global transport logistics is a specialized area of logistics that deals with the management and coordination of the movement of goods and resources through the world's transport networks and supply chains. It involves planning, organizing and controlling all stages of the movement of goods from the initial point of production to the final consumer at the global level. Being subject to the changes taking place in the world, global transportation logistics, its efficiency and security of supply involve various types of risks.

The logistics industry in Kazakhstan is significantly influenced by a variety of external and internal factors. As an importer, Kazakhstan is highly dependent on a well-built supply chain for both import and transit. This article discusses the impact of risks on the logistics industry of the country, as well as risk management aimed at predicting and eliminating the consequences.

This topic was chosen by the author due to his daily observation of the peculiarities and unpredictability of the logistics industry. The article describes examples of events with serious economic consequences not only for the industry, but also for the state economy. The COVID-19 pandemic, the 2020 transport rail collapse between China and Kazakhstan, Russia's invasion of Ukraine and other geopolitical upheavals have had a negative impact on Kazakhstan's transportation industry. A review of events, decisions made, and their consequences can help develop better ways to minimize harm in the future.

Main points

The main objective of this study is to improve the understanding and develop effective risk management strategies in the global transportation logistics. The article focuses on identifying

weaknesses in risk management and security systems. The relevance of the study is to develop specific risk management strategies and techniques that will help companies to reduce risks and provide safer and more secure logistics operations.

Literature review

Within the framework of the research we prepared materials based on our own experience, materials from leading information resources Emerald, ResearchGate, Scopus, as well as a number of articles from Kazakhstan publications. The main groups of risks and methods of interaction with them were identified.

Some of the major risks in global transportation logistics are:

- Supply chain risks: problems with suppliers, any interruptions in production processes or raw material shortages can cause supply disruptions.
- Operation risks: include delays, cargo loss, and vehicle problems such as accidents or malfunctions.

Demand risks: demand uncertainties, competition in the market, market changes:

- Catastrophic risks: natural disasters such as hurricanes, floods and snowfalls can create problems in global transportation logistics, especially if they affect key routes and ports.
- Financial risks: changes in currency exchange rates can affect the cost of transportation and goods, affecting companies' budgets and profits.
- Information risks: data breaches, hacker attacks and other cyber threats can jeopardize shipment and customer information, which can have serious consequences.
- Bureaucratic risks: difficulties in customs formalities and customs documentation requirements can cause delays and additional costs.

These risks are an indicator that, for the smooth operation of transportation logistics, it is crucial to consider the potential threats and uncertainties that can affect deliveries and operations.

In addition to identifying the type of risk, it is necessary to know how to manage them. These timely actions serve to fully or partially level the consequences of risks. The author considers the main tools of risk management to be the following:

1. Risk identification.
2. Risk assessment
3. Development of mitigation plans.
4. Control and audit.
4. Insurance and financial strategies
5. Suppliers and contracts
6. Staff education and training

1. Risk identification

Risk identification is a set of activities that detect, describe and catalog all potential risks to assets and processes that could have negatively impact business outcomes in terms of performance, quality, damage, loss or reputation. It acts as input for actual risk analysis of the relevant risks to an organization. Risk identification is the first step in the risk management process. It involves identification of risk type and/or risk event. Risk identification is a critical process to have a fruitful risk management plan [1]. It allows the enterprise to prepare for potentially dangerous events and minimize their consequences before they occur. It involves not only identifying possible risks, but also documenting and communicating them to concerned parties.

The following steps can be attributed to the risk identification process:

1. Analysis of documentation

Analyzing project files, plans and other information is a common way to identify risks. It involves examining project documentation for accuracy, completeness and consistency. Inconsistencies identified may indicate the presence of risks - for example, an error in the delivery schedule that could affect the timing of new stock arriving at the warehouse.

2. SWOT analysis

SWOT analysis analyzes the project's strengths, weaknesses, opportunities and threats. Understanding weaknesses allows you to identify potential risks and plan accordingly. An example would be if your primary supplier is located in a geographic area with unstable weather conditions: hurricane seasons, snowstorms or flooding threats. Taking this information into account may prompt you not to place large orders with this supplier or to look at suppliers in other regions [2, 3].

3. Risk register

A risk register is a document containing current and potential risks, their possible causes, and protective measures. Such register should be replenished, increasing the area of knowledge on known risks for their timely prevention.

4. Decision Tree

A decision tree is a diagram used for making decisions. It considers several possible future events and analyzes them at a single point in time, which helps to explore the different alternatives that a decision may lead to. Each branch of the decision tree represents a possible solution or event and the leaves represent possible outcomes. A decision tree allows you to visualize the relationship between different events and consider possible advantages and disadvantages before making a decision.

Trade and logistics relations of the Republic of Kazakhstan with the Russian Federation are presented as an example of risk identification. Events concerning Russia's invasion of Ukraine in 2022 have jeopardized the global logistics web, especially trade relations with Kazakhstan. As its closest trading partner, Kazakhstan is under intense scrutiny due to the release of a number of sanctions packages aimed at trade isolation of Russia. This situation on the one hand is favorable for Kazakhstan businessmen, who have an opportunity to weaken imports from Russia, buy goods directly from suppliers and intensify trade with neighbors, including Russia. On the other hand, uncontrolled trade may attract the risk of being subject to secondary sanctions from the West. At this stage, once the potential risk has been identified, the risk assessment stage is underway [4].

2. Risk assessment

Risk assessment is associated with the probability of occurrence of an event and the significance of the consequences [1].

Risk assessment methods can include risk matrix. A risk matrix is a multidimensional method used by organizations to assess risks in supply chain, products, projects and other areas. It is used to obtain more accurate estimates of the probability of success or failure and to identify activities that require increased control [5].

The risk assessment matrix shows the probability of events and their potential consequences. For example, probability refers to the level of probability that a person will be injured when exposed to a hazard, and consequence refers to the severity of the injury.

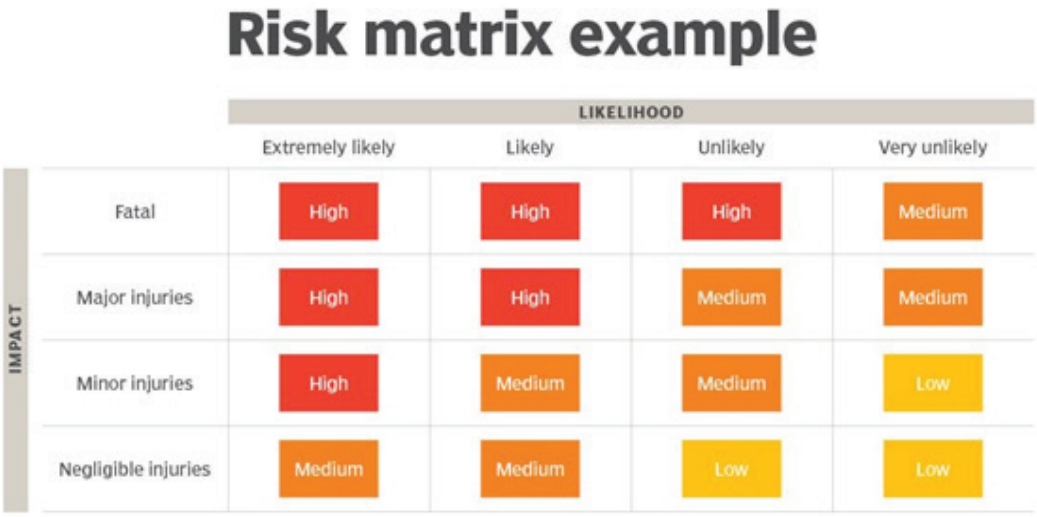

Figure 1 – Risk assessment matrix

Quantitative and qualitative assessments

Risk assessment can be quantitative or qualitative. In a quantitative risk assessment, the professional uses numerical values to determine the probability of an event occurring and its consequences. The resulting numerical values can be used for further calculations.

Qualitative risk assessments do not involve numerical probabilities and loss projections. The purpose of a qualitative approach is simply to place the risks that pose the greatest risk into ranking positions.

Whereas qualitative risk analysis is based on human judgment of risk, quantitative risk analysis is based on specific data.

Returning to our example, there comes the risk assessment stage. The risk of being affected by secondary sanctions implies trade and financial costs. These may include a ban on working with suppliers of goods and services; blocking of foreign assets of legal entities or individuals subject to secondary sanctions; a ban on currency transfers; a ban on individuals subject to sanctions from entering the EU, the UK and the US. In addition, individuals who are residents of Kazakhstan may face criminal prosecution if the offense (and violation of sanctions is a crime) is directly or indirectly related to the jurisdiction of the United States and intent is proven. In contrast to the consequences listed above, one can counterbalance the increased profits that will accrue to a Kazakhstani entrepreneur who takes advantage of the situation [6]. At this stage, it is necessary to determine which leaf from the decision tree to choose: to move towards profit and possible violation of the law, or towards a safer way, but with the probable loss of a trading partner.

3. Development of mitigation plans

Creating mitigation plans is the development of actions to mitigate risks, including contingency plans, alternative suppliers and routes, and stockpiles of goods in case of delivery delays. The importance of this process in global transportation logistics cannot be overemphasized, as mitigation plans help reduce losses in the event of adverse events, and quick response and effective risk management can prevent large financial losses. By analyzing the situation and pre-planning a certain course of action in case of a crisis situation, a company can ensure business continuity in a crisis [7]. To maximize the effectiveness of mitigation plans, it is important to develop a step-by-step plan of action that leads you step by step to successfully overcome the crisis. Let's take a look at the key steps in developing mitigation plans for risk management in global transportation logistics:

The mitigation strategies developed are gradually implemented and regularly monitored. It is considered to ensure that the plans are up to date and effective.

An example of a mitigation strategy in a transportation and logistics company might involve the risk of delivery problems due to natural disasters such as hurricanes or earthquakes. Let's call this strategy "Diversifying routes and warehousing to minimize the impact of natural disasters." The goal of the strategy is to provide assurance of continuity of supply and reduce potential losses due to disasters. The steps to implement the strategy will consist of 8 points (Figure 2, p. 161).

Steps for strategy implementation:

1. Risk identification. Assess the risk of natural disasters affecting the company's routes and storage facilities. This includes analyzing historical disaster data in the regions where the company operates.

2. Route diversification. Developing several alternative routes to deliver goods. These routes may be physically separated and pass through different geographic areas to reduce the risk of all routes being blocked at the same time.

3. Development of alternative storage facilities. Locating warehousing facilities in different regions. This allows inventory to be moved and orders from other warehouses to be processed in case one of them becomes unavailable due to a disaster.

4. Monitoring and Response Systems. Installation of natural disaster monitoring and warning systems. This allows the company to get quick information about possible threats and take precautionary measures.

5. Training of employees. Training company personnel, including drivers and warehouse workers, on safety and what to do in the event of a disaster.

6. Critical resource redundancy. Establishing reserve stocks of fuel, food, and other critical resources necessary for continuity of operations during a crisis.

7. Business plans for crisis situations. Developing detailed business plans for natural disasters. These plans include evacuation, recovery, and communications procedures.

8. Regular updates and verification. Periodically updating the mitigation strategy and testing it for effectiveness in the context of changing risks and conditions.

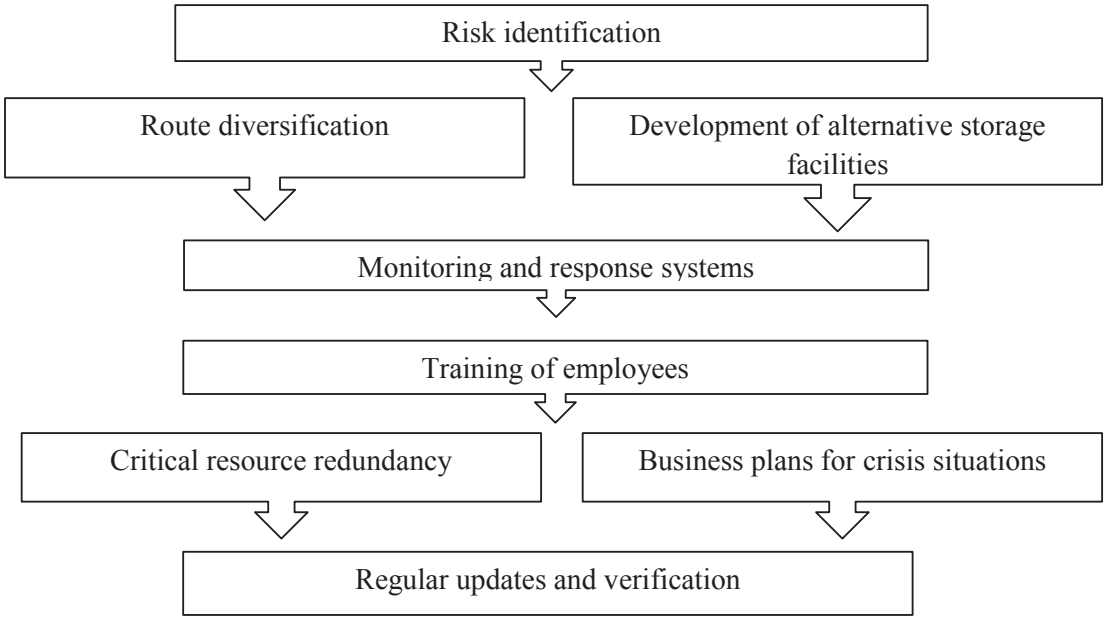

Figure 2 – Steps to implement the strategy

A company with a risk mitigation plan has a number of benefits, such as minimizing supply disruptions during natural disasters, reducing losses and increasing business resilience, enhancing the company's reputation as a reliable partner, and improving the safety of employees and property [8]. It is important to remember that each company has its own unique risks and mitigation strategies should be tailored to the specific conditions and needs of the organization.

Developing risk mitigation plans in global transportation logistics is essential for business success. It allows companies not only to survive in conditions of instability, but also to develop, build long-term relationships with customers and strengthen their position in the market [9].

Let consider ways to minimize the risks in the concluding stage of our example.

To avoid the risk of secondary sanctions at the moment, all Kazakhstan trading and transportation companies are advised not only not to violate sanctions, but also to exercise due diligence when working with their clients in order not to be involved in the supply of dual-use goods to the Russian Federation and the Republic of Belarus:

- verify the founders of their partners, and if a RoK resident company has Russian Federation citizens among its founders, trade in sanctioned goods, especially dual-use goods, with such companies may be considered a sanctions violation.
- Request documents confirming that sanctioned goods, especially dual-use goods, will not enter the territory of the Russian Federation (end-user certificate).
- Pay attention to whose technology is used, because if computer chips are purchased in China but manufactured using American technology, this is also a violation of sanctions;
- pay attention to a sudden shift in the interests of partners in terms of procurement and delivery (they have always traded in furniture and suddenly started shipping drones) – in such cases, it is also recommended to refuse to cooperate;
- avoid working with companies that use non-standard payment schemes (via third countries).

These measures are also well suited for the next point describing control and audit strategies, as well as the selection of suppliers based on information gathering and situation assessment.

4. Control and audit

Compared to risk assessment and mitigation, risk monitoring has received less attention in the literature [10]. An effective risk monitoring system, especially in terms of product quality, labor safety risks, inventory control, etc., is essential to track and assess risks in the supply chain [11]. Such a system could be the Internet of Things. The Internet of Things (IoT) is a globally structured network used to connect objects equipped with technology capable of transmitting information [12]. This technology can be used to monitor risks and control them in real time if needed. Data flow analysis using modern technologies and transportation management systems is an important component of risk management and operations optimization [13]. For example, installation of GPS trackers and sensors on vehicles helps in tracking and monitoring their location, condition, collects data on speed, fuel consumption, temperature and other parameters affecting transportation services. It is an important practice in today's world used in various fields such as logistics, security and fleet management. There are several steps to follow when installing such trackers: choose a location; consider how it will be powered; install according to the manufacturer's instructions; configure the GPS tracker; connect it to a monitoring platform or application; set up an alert system; train your staff on the correct use of the tracker; perform regular maintenance; and ensure that the installation and use of GPS trackers complies with the country's laws and does not violate private rights. The second step in analyzing data flows can be using information logistics systems, creating a Data Control Center. A data management center is a centralized infrastructure and system that allows data to be collected, processed, analyzed, and managed in order to make more informed decisions. Using such a center can significantly improve an organization's ability to make data-driven decisions and improve economic performance [14]. It is a powerful tool for analyzing and optimizing business processes. With improved data monitoring and analysis, organizations can manage their resources such as vehicles, equipment, and personnel more efficiently. This reduces costs and optimizes resource utilization. The third step in analyzing data flows is highlighted by data analytics [15]. Such analytics is based on demand forecasting, route optimization and resource allocation. Modern organizations, whether they are logistics companies or delivery service providers, are faced with the need to effectively manage demand, routes, and resources. Efficiency in these areas becomes crucial for success and competitiveness. This is the reason why demand forecasting is a key element of inventory, production and delivery planning. Route optimization is also essential for logistics companies, delivery companies, and even passenger transportation. Resource allocation involves the efficient management of an organization's personnel, transportation, and other assets.

Regular audits and inspections of suppliers are important to ensure that manufacturing processes and products meet established standards. This process helps companies to assess whether suppliers are meeting expectations and whether it is worthwhile to make decisions about long-term cooperation with them. An example of supplier performance evaluation (Table 1):

Table 1 – Stages of supplier performance evaluation

Establishment of evaluation criteria	Define the criteria and metrics against which supplier performance will be evaluated. Criteria may include product quality, on-time delivery, price stability, customer service and other aspects important to your business.
Data collection	Collect supplier performance data based on defined criteria. This data may include audit results, customer feedback, delayed delivery statistics, and other metrics.
Performance evaluation	Evaluate each vendor's performance based on the data collected. This may include calculating scores or grades for each criterion.
Supplier Comparison	Compare the performance of different suppliers against each other on the metrics you are interested in. This will help you identify the best and worst suppliers.
Monitoring and regular evaluations	Continue to monitor vendor performance over time. Regular evaluations will help ensure stability and improvement in service quality.
Decision-making	Based on the results of the evaluation, make decisions to continue working with suppliers, revise them or terminate the cooperation.
System of rewards and incentives	Develop a system of rewards and incentives for top suppliers, which can be an additional incentive to improve and maintain high performance.

Thus, by continuously monitoring and managing supplier performance, it is possible to confidently build long-term, reliable partnerships and ensure a high standard of quality in logistics operations. Speaking about control and audit in risk management, it is worth noting that they help to ensure transparency, efficiency and safety of logistics operations, as well as minimize financial and operational risks, which is especially important in global transport logistics, where many variables can affect business success [16].

5. Insurance and financial strategies

Logistics process is accompanied by various risks such as cargo loss, damage, delivery delays and other unforeseen events. To minimize risks, it is worth starting with cargo insurance. This type of insurance covers loss or damage to cargo during transportation. Cargo insurance can be a policy for a specific shipment or an annual policy that covers all of a company's shipments and prevents financial loss. The next important object of insurance is the vehicle. This type of insurance covers the company's vehicles against damage, theft or other losses. It helps to ensure that the vehicles are in a reliable condition and prevents financial loss in case of an accident. Some companies may also insure themselves against financial losses due to delays in delivery of goods. In addition, companies can also employ various financial strategies to manage risks in transportation logistics. This can include the use of financial derivatives to protect against fluctuations in currency exchange rates or fuel prices, as well as the development of financial plans for crisis situations. A really powerful step can be the creation of financial reserves that can be used in case of unforeseen events.

Let's look at an illustrative example of cargo insurance. Suppose you have a company that manufactures electronic devices and you ship goods from your manufacturing plant in China to your central warehouse in the United States. Before shipping the goods, you decide to insure them because you don't want to risk losing expensive goods in transit. You contact an insurance company and take out a policy for this shipment of goods [17]. The policy specifies the terms of insurance, including the amount of coverage, the insurance premium (cost of insurance), the term of the policy, and the types of risks it covers. For example, the policy may cover loss of cargo in case of theft, fire, natural disasters, or damage to goods in transit. Your shipment is being delivered by sea from China to the United States. During transportation, a severe storm occurs and damages a container with your goods. When the shipment arrives in the U.S. and you inspect its condition, you discover that some of the goods are damaged and cannot be sold. You contact your insurance company and file a claim for damages. The insurance company assesses the loss, taking into account the terms of the policy, and pays you an amount sufficient to cover the loss, the damaged goods, and possible loss of profits. In this example, there is a clear algorithm for the development of events:

1. Choosing an insurance policy
2. Choosing insurance terms and conditions
3. Sending the cargo
4. Loss of cargo
5. Compensation of losses

The above situation clearly demonstrates how cargo insurance allowed the company to minimize financial risks associated with loss or damage to goods during international transportation. This helped to ensure financial security and maintain the profitability of the business even during unforeseen events. In general, insurance and financial strategies in transportation logistics help to reduce financial risks and provide more stable business management in the variable and unpredictable environment of global logistics [18]. These tools allow companies to protect their assets, customers and profitability.

6. Suppliers and contracts

Careful selection of suppliers and partners with strong reputations and reliable logistics systems plays a key role in risk management in global transportation logistics. Effective supplier management and appropriate contracting help to minimize various types of risks in this area [19]. One of the key aspects of risk management in transportation logistics is the selection of reliable suppliers. Companies with a good reputation, on-time delivery, and adherence to required quality standards can help reduce the risks associated with substandard goods, delays, and other problems. Finding a reliable supplier, research their reputation and history in the market can be done by studying reviews and testimonials

from other customers, as well as doing additional research through professional organizations or business ratings. Make sure the supplier meets the necessary certifications and quality standards, especially if this is critical to your industry or products. Evaluate the supplier's financial health to ensure that they are able to fulfill their obligations on a long-term basis. It will be helpful to request financial performance reports or evidence of creditworthiness. Investigate the supplier's ability to meet your needs in terms of volume, quality and delivery time. Pay attention to the availability of backup capacity to handle unforeseen events. It is important that the supplier is open to communication and collaboration. The easier you can communicate and resolve problems, the more reliable it will be [20].

Entering into long-term contracts with reliable suppliers can ensure a more stable supply and predictability in the cost of goods. They may also include terms that establish the supplier's liability in the event of risks, such as delays in delivery or damage to goods. Some companies have special agreements with suppliers that establish risk management procedures. For example, such agreements may provide for joint participation in insurance program or resource plans to minimize financial risks. Third-party logistics providers are often used to transport goods across borders and continents. Contracts with such providers may impose conditions related to guaranteed delivery times, liability for lost or damaged shipments, and certain penalties if conditions are violated. If suppliers use contractors or frontline vendors, it is important to monitor their activities and obligations to prevent unforeseen risks. By regularly tracking and evaluating supplier performance, risks and problems can be identified early and corrective action can be taken.

7. Staff education and training

Training employees in emergency response and risk management is a critical part of an effective risk management program in global transport logistics. It is best to start by developing a training plan [21]. You should identify what risks and emergencies may occur in your logistics operations and what skills and knowledge employees need to manage them. It is important to understand which employees have key roles in risk management and emergency response. This could be logistics managers, security officers and those responsible for cargo insurance. The training plan may include courses, webinars, seminars or internal trainings. Employees should know how to respond to various emergency situations such as traffic accidents, natural disasters, strikes and others [22]. Along with the training, detailed action plans should be developed for each employee in an emergency situation. The plans should include the steps of responsible persons and communication strategies. In addition, it is important to ensure that employees have access to necessary information and resources, including emergency contacts, insurance companies, and other important contacts.

Emergency drills and exercises can be conducted for greater immersion. They allow you to test your staff's preparedness to deal with real or simulated emergencies and identify areas for improvement.

According to the assessment of the Kazakhstan expert group, the problem of personnel training in general is one of the most serious risks in the near future. There is an acute shortage of qualified personnel in the country. Almost 90% of experts believe that the problem of lack of qualified specialists will not be solved in 10-15 years and will remain a key constraint to the development of TLC. The consequences of this risk are the weak pace of development of the region, which is significantly behind the level of world leaders. Accordingly, a strategy to minimize this risk is required, which consists in the redesign of training programs that meet modern requirements, a significant increase in the share of public investment in the development of the industry, revision of bureaucratic schemes for the interaction of international partners..

Materials and methods

The necessity of this study appeared when observing and participating in the personnel development of large companies, exchanging opinions with the heads of companies in various sectors of activity. Subsequent study of information from public data sources, as well as private research, confirmed the extent of the human resource deficit. The method of constant observation and content analysis of documents were used in the research process. When preparing this article, an array of information was formed based on the author's personal experience in personnel management, the experience of managers of some of the leading transportation companies in the Republic of Kazakhstan, as well as

on relevant information from scientific sources and data from state information resources. Regularities in the similarity of opinions among experts about risk management and forecasts of its development were identified. The systematization of the collected material contributed to the identification of the main problems of the current risk policy [23]. The described research methods were chosen as the most appropriate. Logistics is developing rapidly, requiring market players to react to its changes in a timely manner. Top managers of transportation companies are the most important source of information about the current situation. From the obtained conclusions a strategy of actions is built to overcome the problem areas.

Results and discussion

The logistics industry is closely related to planning. The links in the chain of logistics processes, is a set of factors, each of which reacts to the slightest changes in the environment. Some events are subject to planning, some are not, as it is impossible to foresee everything. However, the more processed risks there are in the organization's portfolio, the less unexpected events can interrupt logistics processes and harm their participants. The future of logistics in Kazakhstan depends on competent planning of the general concept of the industry development, taking into account previous experience, current situation, adequate assessment of available resources. It is pointless to count on a comprehensive large-scale technological leap, as Kazakhstan needs to overcome many heterogeneous obstacles and solve a wide range of problems. Nevertheless, innovations are necessary, in many respects they contribute to overcoming these same difficulties, but at the same time they dictate a completely new paradigm of the market of transportation and logistics services, both internal and external. Therefore, the process of technical renewal should be approached with caution, carefully weighing the risks and thinking through the prospects. We should not undertake extremely risky pompous projects based on image prerequisites, but analyze their profitability in detail, not plunge into the total introduction of advanced technologies, but, based on pedantic assessments of their capabilities and adaptability to our realities, organize their consistent dosed integration in accordance with objective needs.

As practice has shown, in some cases Kazakhstan was not ready to make the right decisions in non-standard situations. An example is the transportation collapse that took place in 2020 on the border of Kazakhstan with China. This event was caused by the ban of the company Kazakhstan Temir Zholy on the use of foreign rolling stock. The purpose of this decision was explained as an attempt to support the Kazakhstan railroad sector, as foreign owners of rolling stock are dumping, beating the prices of Kazakhstan owners with a difference of more than 30%. And since Kazakhstan's own resources were insufficient to organize a huge amount of transportation from China for its own imports, China stopped allocating rolling stock for imports to Kazakhstan due to severe time delays on the part of Kazakhstan. In this example, the consequences of the chosen path were incorrectly considered. On the one hand, the aim was to protect the Kazakhstan service provider. The downside is a critical reduction in imports, which affects Kazakhstan manufacturing and entrepreneurship. The severe reduction in the already small number of rolling stock has provoked even more speculative uncontrolled price increases on the ground. The consequences have an impact every day, as a very large volume of imports pass through the China-Kazakhstan border and into Uzbekistan via Kazakh territory. The use of platforms is to pay for the use of the railroad, China and Uzbekistan now make a way to bypass Kazakhstan. This fact is a major negative consequence of ill-conceived risks. From this example we can conclude and revise the current views on the functioning of the logistics industry in Kazakhstan.

From a risk analysis perspective, this situation can be viewed in the following manner. As of the last quarter of 2023, Kazakhstan's railroad transportation authorities have attempted three times to ban the importation of foreign wagons and flatcars. The first stage of risk analysis is to identify the risk itself. In other words, a number of possible consequences are identified. In this case, a complex decision is made to prohibit KTZ from importing and using foreign wagons and platforms. For complex decisions, SWOT analysis comes to the rescue by identifying all sides of the controversial issues. The strength of the decision to ban the import and use of foreign cars and platforms is the strengthening of KTZ's position. Elimination of competition in the form of cheaper services of foreign carriers in the local

rail transportation market will lead to higher prices for rolling stock services for importers. This will result in higher profits for KTZh and an opportunity to regulate other aspects of the market. From this assessment we have the following results. Strengths: increased profits and elimination of competition. Opportunities: opportunity to regulate further pricing policy, support the Kazakhstan railroad sector, as foreign owners of rolling stock are dumping, beating the prices of Kazakhstan owners with a difference of more than 30%. The weaknesses of this decision include the inability of the Kazakhstan transportation industry to absorb the huge volume of goods. Accordingly, Weaknesses: Kazakhstan's own resources were insufficient to organize a huge amount of transportation from China for its own imports. Based on the weaknesses of the current situation, we can deduce potential threats: complete shutdown of China's imports and transit through Kazakhstan due to its inability to master the flow of goods, leading to long-term idling of platforms with cargo at the borders; shutdown of Kazakhstan importers with a complete freezing of contributed assets, lack of funds for staff maintenance, layoffs; disruption of the pace of production dependent on imports of foreign raw materials; disruption of supplies of food and household goods; strategic failure of the Kazakhstan's importing industry; disruptions in the transportation of goods from China for its own imports.

The subsequent stage of assessing the likelihood and severity of risk consequences, judging by several failed attempts by KTZ to introduce bans, either had no effect or the likelihood and consequences of the risk satisfied the expectations of Kazakhstan's railroad transportation management. On the other hand, the subsequent repeal of bans suggests that the overall results were either short-term positive or overly severe. The repetition of risky decisions time after time suggests a weak assessment of the consequences of risk, or its neglect in favor of short-term positive results. Both examples have negative consequences in general on the economy and development of the transportation industry of Kazakhstan and cause a lot of negative reactions from importers, exporters and manufacturers.

The stage of creating a risk mitigation plan took place, although it had a partial effect. Several Russian companies, with which, apparently, there were certain agreements, did not fall under the ban. However, this caused dissatisfaction of the other transport operators at the level of the State Duma of the Russian Federation. Russian operators believe that this measure clearly demonstrates KTZ's interference in the financial and economic activities of domestic companies engaged in cargo transportation, and emphasizes the anti-competitive nature of the convention. Thus, the entire Republic of Kazakhstan, and not its individual stations and shippers, falls within the scope of the convention. Meanwhile, the introduction of prohibitions of this kind along the entire perimeter of the state border belongs to the sphere of national policy and is not the jurisdiction of the economic entity – KTZ.

This situation clearly shows the impact of the decisions made on the future situation, especially when it comes to the state level. On the one hand, Kazakhstan acted in favor of national interests, strengthening the position of national companies. However, the price to be paid for this determines risk management as an integral part of business processes at all levels. The decisions made do not always clearly reflect the goals pursued, there are also hidden motives, but the consequences are reflected in the rest of the market participants. It follows that no one is immune from risk, but it is necessary to provide resources to overcome it. KTZ would have no problem accepting Chinese cargoes if it had sufficient resources to master it. After all, before this ban, there was a certain shortage of transportation even taking into account foreign rolling stock. To avoid such incidents in the future, it is necessary to develop the influence and practical application of risk management with decentralized management, so that decision-making is taken collectively, taking into account all possible consequences. At this stage, control measures and auditing are involved, investigating past decisions and systematizing them, as well as preventing them in the future. Revision of financial strategies to reduce the cost of rolling stock services for domestic participants will eliminate the predominance of foreign rolling stock even without their ban. A developed network of suppliers will eliminate the monopoly of some participants, give an impulse for the development of service quality and price reduction.

The main investments should be directed towards improving transport and logistics infrastructure, automation, digitalization and robotization, as well as human resources and improving the quality of services provided. Investments in automation, robotization and digitalization should result in a technological breakthrough in the organization and regulation of transport flows, warehousing and storage of cargo, transport and logistics infrastructure, as well as in workflow and supply chain

management. A key opportunity for businesses involved in transportation and logistics will be technological re-equipment, which will significantly increase their market potential and the volume of services provided, with a parallel reduction in costs.

Competent risk management and planning tools allow us to hope for the successful development of the transportation and logistics industry, provided we eliminate current problems and prevent future risks. It is especially important to introduce new technologies quickly and smoothly and to take into account all possible socio-economic and political factors. The cross-border nature of TLC makes it necessary to take into account a multitude of unforeseen situations that may arise as a result of decisions taken by other states and changes in the global geopolitical environment [24].

Conclusion

Overall, the article emphasizes that a strategy focused on risk identification is a fundamental element of successful global transportation logistics management. Without a deep and accurate understanding of the risk environment, a business can be vulnerable to unforeseen events, while proactive risk management helps to ensure stability, reliability and competitiveness in the industry. Effectively managing these risks is the key to successful global transportation logistics, and companies are constantly looking for better ways to deal with unexpected events. Practice shows that there is still much to learn – in some cases, theory is often at odds with practice. Risks shape the development of transportation logistics by reducing the likelihood of erroneous decisions that lead to undesirable consequences. Sorting out erroneous actions and their consequences is an effective method for developing processes to ensure that mistakes are not repeated. Over time, an impressive database of risks will be assembled that is easy to learn for both new and experienced practitioners. Dissemination of the science of crisis management will lead to an overall improvement in logisticians' awareness and bring Kazakhstan to a new level of preparedness to confront external and internal unwanted influences of all kinds.

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ҚАЗАҚСТАННЫҢ КӨЛІК ЛОГИСТИКАСЫНДА ТӘУЕКЕЛДЕРДІ БАСҚАРУ СТРАТЕГИЯСЫ МЕН ОЛАРДЫ ТАЛДАУ ӘДІСТЕМЕСІ

Аңдатпа

Бұл мақаланы жазудың мақсаты Қазақстанның дамып келе жатқан логистикалық кешені үшін маңызды тақырыпты жариялау. Тәуекелдерді басқару стратегиясын және олардың салдарын зерттеу Қазақстан экономикасын дамытудың ең қысқа және тиімді жолын таңдауда негіз қалаушы құрал. Автор Қазақстандағы тәуекелдерді басқару мәселелеріне және оларды шешуге қатысты өзінің жеке көзқарасын ұсынады. Мақала зерттелетін тақырыптың маңыздылығын көрсете отырып, осы ғылыми сегменттегі бар білім көлемін толықтыруға арналады. Қазақстанның логистикалық саласы басқарудың көптеген заманауи әдістері мен бизнес-процестерді зерттеу алдында тұр. Дағдарысқа қарсы шаралар стратегиясын әзірлеу саланың дамуындағы тоқыраудың алдын алады. Сонымен қатар автор зерттелген материалды Қазақстандағы нақты логистикалық процестермен және оқиғалармен салыстырады. Қателіктермен жұмыс жүргізу өзін-өзі дамытудағы алғашқы қадам. Мақала тәуекелдерді анықтауға, жіктеуге, олардың пайда болу ықтималдығын барынша азайту жөніндегі стратегияларды белгілеуге және салдары болған жағдайда оларды азайтуға тырысады. Зерттеу қорытындысында Қазақстанның дағдарысқа қарсы саясатының кейбір жағдайларда жетілмегендігі туралы факт мойындалды. Сондай-ақ автордың пікірінше, Қазақстанның логистикалық саласын дамытудың басым жолдары қарастырылуда.

Тірек сөздер: көлік логистикасы, тәуекелдерді басқару, тәуекелдерді басқару стратегиялары, SWOT талдауы, деректерді талдау, көлік құралдары, бақылау.

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СТРАТЕГИЯ УПРАВЛЕНИЯ РИСКАМИ И МЕТОДИКА ИХ АНАЛИЗА В ТРАНСПОРТНОЙ ЛОГИСТИКЕ КАЗАХСТАНА

Аннотация

Цель данной статьи – осветить важную тему для развивающегося логистического комплекса Казахстана. Изучение стратегий управления рисками и их последствий является основополагающим инструментом при

выборе кратчайшего и наиболее эффективного пути развития экономики Казахстана. Автор предлагает личный взгляд на проблемы управления рисками в Казахстане и возможные пути их решения. Статья призвана дополнить существующий массив знаний в данном научном сегменте, тем самым подчеркивая важность исследуемой темы. Логистическая отрасль Казахстана стоит на пороге освоения различных современных методов управления и бизнес-процессов. Разработка стратегий антикризисных мер позволит избежать стагнации в развитии отрасли. Параллельно автор сопоставляет изученный материал с реальными логистическими процессами и событиями в Казахстане. Проведение работы над ошибками – первый шаг в саморазвитии. Цель статьи – выявить, классифицировать риски, наметить стратегии минимизации вероятности их возникновения, а в случае их возникновения минимизировать последствия. Выводы исследования включают признание факта несовершенства в ряде случаев антикризисной политики Казахстана, что привело к принятию непродуманных решений, приводящих к нежелательным долгосрочным последствиям. Также рассматриваются приоритетные, по мнению автора, пути развития логистической отрасли в Казахстане.

Ключевые слова: транспортная логистика, управление рисками, стратегии управления рисками, SWOT-анализ, аналитика данных, транспортные средства, контроль.

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