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## **THE MAIN DIRECTIONS OF OPTIMIZATION OF LOGISTICS COSTS FOR ENTERPRISES OF THE ARKHANGELSK REGION**

*Аннотация: В статье определена роль процессов оптимизации затрат на предприятиях добывающей отрасли. Описаны основные проблемы, которые сдерживают развитие предприятий, функционирующих в Арктической зоне. На основе опыта зарубежных и отечественных компаний, разработаны пути повышения эффективности процессов управления запасами на примере предприятия ПАО «Севералмаз».*

**Ключевые слова:** оптимизация логистических затрат, управление запасами, рентабельность, инвестиции, горнодобывающая отрасль, предприятия Арктической зона, ПАО «Севералмаз».

**Annotation:** The article defines the role of cost optimization processes in the mining industry. The main problems that constrain the development of enterprises operating in the Arctic zone are described. Based on the experience of foreign and domestic companies, ways of improving the efficiency of inventory management processes have been developed on the example of the company PJSC Severalmaz.

**Key words:** optimization of logistics costs, inventory management, profitability, investments, the mining industry, enterprises of the Arctic zone, Severalmaz PJSC.

At the moment, one of the most important problems that extractive industries have is the gradual depletion of the existing reserves and the forced need to develop high-cost deposits in economically underdeveloped areas, especially in the Arctic zone. And on the way to solving these problems, there are barriers such as a high degree of depreciation of fixed productive assets, low technological level of enterprises, lack of new technologies for developing new deposits.

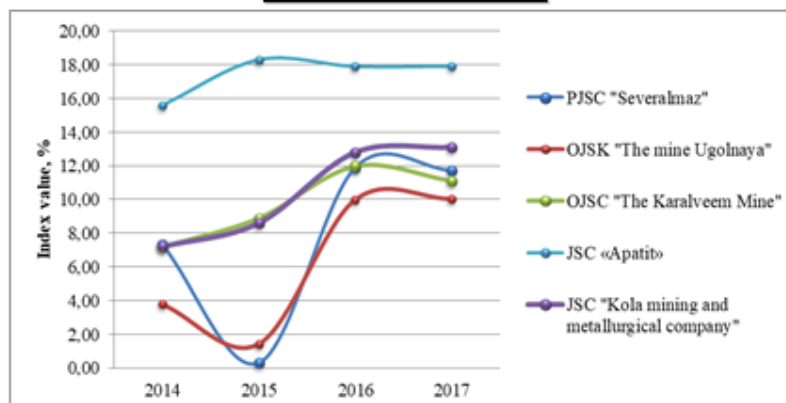
Additional financial resources must be found to carry out exploration work, develop new technologies and acquire modern equipment. These resources can be not only external investments, but also equity capital received from cost optimization. So, the research question is «What direction of cost reduction at the mining enterprises of the Arkhangelsk region is most effective and popular at the moment?».

Consider the activities of the most prominent Russian mining companies operating in the Arctic (except for oil producing and gas producing enterprises). Brief information you can see on the slide.

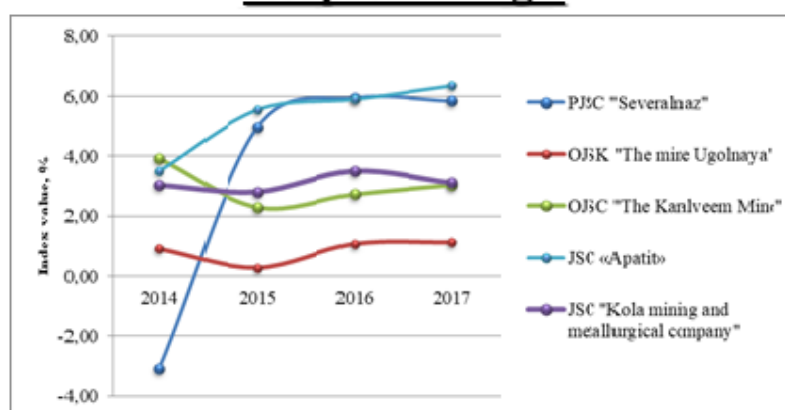
Analysis of the financial and economic activities of 5 companies in the period from 2014 to 2017 shows that at the moment companies have a sufficient level of financial stability and solvency. However, assessing the company in terms of economic efficiency, it can be noted that companies have an insufficient level of investment

attractiveness. Despite the positive financial results in 2017, the level of profitability is low.

### Return on sales



### Net profit margin



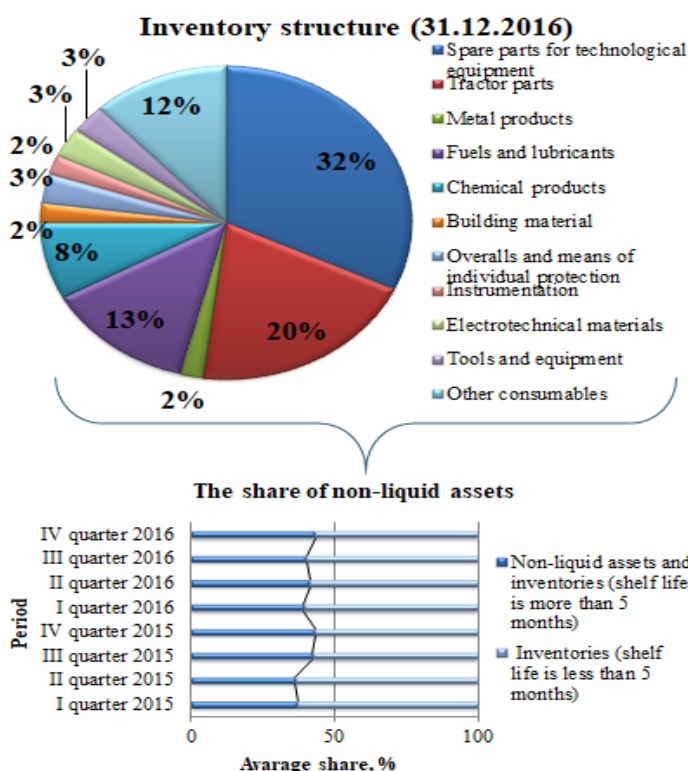
*Pictures 1. The dynamics and structure of revenue*

The main reason for the low profitability is the high cost of production. At the same time, the analysis of charts shows the positive dynamics of profitability indicators is due not so much to the optimization of cost management processes, as to other factors, such as: price factors (growth of market prices for products sold and exchange rates fluctuations); increase of efficiency of non-core activities.

Based on the analysis, we can conclude that the mining industries of the Arkhangelsk region, despite the normal level of financial stability and solvency, do not have sufficient financial resources to conduct active innovation policy. In addition, low profitability indicators make them less attractive to foreign investors.

25 senior and middle managers of top management were interviewed. Based on this survey, it can be concluded that the extractive industries are characterized by problems related to inventory management:

1. long-term operational and financial cycle;
2. high share of illiquid assets of the enterprise (for example, in PJSC Severalmaz about 40% of the current reserves are illiquid);
3. absence of a specific methodology for creating an insurance reserve;
4. lack of a system of inventory management at the enterprise, inconsistency in the work of the logistics and warehouse management.



**Picture 2. Problems related to inventory management  
(on the example of PJSC Severalmaz)**

About 50% of respondents believe that this is the main problems that can really be solved without attracting significant funding. Based on the studied foreign and domestic experience in the field of inventory management, the following ways of optimization of inventory management processes:

1. division of inventory responsibility areas;
2. development of a methodology for determining the normative level of reserves

3. development of a unified classification of inventory accounting units
4. cooperation with key suppliers under the consignment scheme;
5. conclusion of contracts on delivery of annual volume of goods and materials on the terms on party delivery;
6. reorganizing storage locations in a warehouse.
7. improving the accounting information system.

Thus, possible ways of increasing the efficiency of inventory management processes at the enterprise of PJSC «Severalmaz» were identified. Further, it is planned to study in more detail foreign and domestic experience of inventory management for working out selected directions (in particular, to study various methods of determining the insurance reserve, methods of organization of storage sites, existing information systems of accounting, etc.). After the approval of the program of measures, it is planned to prepare their financial and economic feasibility, including the determination of the effect from their implementation, assessment of possible risks and prospects for the development of the stock management system of PJSC Severalmaz.

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