IMPROVING MECHANISMS FOR ENSURING THE STATE'S DEFENSE AND SECURITY WITH MODERN EQUIPMENT AND SPECIAL EQUIPMENT BASED ON ECONOMIC PRAGMATISM

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ABSTRACT

Trends in the development of the geopolitical and national-strategic situation in the modern world, the activation of organized international terrorism and the transition to the conduct of high-tech armed conflicts of various intensity require a new attitude to the principles, directions and content of the safe construction of the state in General and material and technical policy in particular.

This implies the need to improve the existing system of logistics policy in order to strengthen the state's defense capability.

The main purpose of this work is to study the problems of a highly technical system for ensuring the defense and security of the state, taking into account real economic opportunities, and to develop on this basis theoretical and practical recommendations aimed at improving the state material and technical policy.

With this goal in mind, the following tasks have been solved:

- *A new approach to supply high-tech samples of equipment and special equipment to law enforcement agencies in the logistics system of the military organization of the state is proposed;*
- *Developed the draft Catalogue special regulation in the form of a structural and logic scheme that determines the direction for the development of new specific standards, including for the production of domestic models of equipment and special equipment, the implementation of the principles of the quality management system in manufacturing of special products and logistics power structures;*
- *A section of the Inventory of equipment and special equipment of the security forces has been developed, defining the requirements for its compilation in accordance with current national standards, with subsequent harmonization with international standards for cataloging security forces supplies;*
- *A mechanism has been developed for the effective use of budget funds allocated by the state to solve the problems of the country's military-industrial complex and to equip law enforcement agencies with domestic modern equipment and special equipment and material and technical means;*
- *A model of the functioning of a fleet of special equipment has been developed.*

Thus, scientific-theoretical and practical-methodological approaches to improving the process of military-technical and military-technological support of defense and security on the basis of economic pragmatism are proposed.

The results obtained can be used by state bodies in the development of conceptual or program documents in the field of military-technical policy aimed at developing a highly technical system for ensuring the country's defense and

security based on the principle of economic pragmatism.

The results of the research will contribute to improving the system of equipping the state's security forces with new high-tech equipment and special equipment, as well as to the development of the domestic special industrial complex.

KEYWORDS: *High-Tech Support, Equipment and Special Equipment, Effective use of Budget Funds, Material and Technical Policy*

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INTRODUCTION

Trends in the development of the geopolitical and military-strategic situation in the modern world, the activation of organized international terrorism and the transition to the conduct of high-tech military conflicts require a new attitude to the principles, directions and content of the safe construction of the state in General and material and technical policy in particular.

This implies the need to improve the existing system of material and technical policy in order to strengthen the security of the state.

In this paper, we study the problems of high-tech system for ensuring the defense and security of the state, taking into account real economic opportunities, and develop theoretical and practical recommendations on this basis aimed at improving the state material and technical policy.

The object of research is the security of the state.

The subject of the research is high-tech support for the defense and security of the state.

The purpose of the research is to develop theoretical and practical recommendations based on economic opportunities aimed at improving the state material and technical policy in the field of defense and security.

Research methods include: system analysis, comparative analysis, structural and logical analysis, economic analysis, logistics analysis, conceptual and analytical analysis, retrospective analysis, analysis and generalization of scientific and technical information, scenario-quantitative method, complex numerical modeling, mathematical methods, structuring and optimization of indicators, economic and mathematical methods and General scientific methods.

The relevance and significance of the study lies in the fact that for the first time on the basis of the principle of economic pragmatism comprehensively reviewed aspects of the high-tech system of defence and security of the state in mutual alignment with integrated logistics power structures of the state in the conditions of modern economic relations.

MECHANISM FOR SUPPLYING HIGH-TECH EQUIPMENT SAMPLES AND SPECIAL EQUIPMENT TO THE STATE POWER STRUCTURES

The development of a mechanism for supplying high-tech equipment and special equipment to state power structures is due to the global growth of international conflicts and the use of high-tech means of struggle (Bowersox, 2001).

In order to ensure high-tech defense and security of the state based on economic pragmatism, it is necessary to develop such a mechanism (methodology) supply of high-tech samples of equipment and special equipment (SST) of law

enforcement agencies, which will allow in a limited budget to provide their needs as effectively as possible, corresponding to the criteria of optimal price-quality ratio (Kozhamkulova, 1999).

The supply mechanism is determined by the composition of the tasks to be solved in this functional area and the nature of the work performed (Stepanov, 2009). Their implementation determines the following stages of the procurement process:

Awareness of the Need for Certain FTA Samples

This need comes from the development strategy plans and concept documents. The forecast of the country's economic development is of great importance, because in conditions of limited material and monetary resources, the most important thing is their optimal distribution, that is, the choice of those types and samples of FTS, the absence or presence of which has the greatest impact on the country's military security. This approach is based on the principle of economic pragmatism.

Description of Requirements for Specific FTS Samples

At this stage, a comparative analysis of the tactical and technical characteristics of ready-made samples of FTS from various manufacturers is carried out. According to which the main characteristics and the required amount of the required FTS are determined.

Research of the Purchasing Market, i.e. Monitoring of the Market and Suppliers of FTS Samples

A tool for practical implementation of the principle of economic pragmatism in the field of security is a high-quality special-scientific (special-technical) expertise at all stages of the supply mechanism, which will be a "filter" for inefficient decisions on the allocation of allocated financial resources.

For this purpose, it is proposed to use the so called ABC analysis method of the purchased product (Tulembayeva, 2008). According to this method, all managed objects must first be evaluated by the degree of contribution to the overall result of activity, then divided into three subsets A, B, and C based on a formal algorithm.

Given the specifics of the sphere of military security, where it is necessary to respond to a variety of threats, it is not possible to plan for the purchase of only class a samples in conditions of limited resources. it is Proposed to use the ABC-analysis method to determine the optimal ratio of different types and samples of FTS in a certain amount when determining the need and distributing the allocated funds (Korovkin et al., 2000). in Other words, periodically it is necessary to carry out a deep analysis and on the basis of the proposed methodology, distribute the set of different types and samples of FTS in classes A, B and C.

The main provisions of the FTA procurement based on the ABC analysis methodology are as follows:

- Purchases of class a FTS samples are made from more reliable suppliers than for classes B and C.
- Class a Items are subject to more thorough control.
- Forecasting the need for class a FTS samples is carried out in more detail, taking into account the increased requirements.

The main stages of solving the problem of selecting a supplier of the FTS include:

- **Search for Potential Suppliers**

Systematic research is carried out to determine the potential supplier of FTS, according to the most optimal requirements. For which the list of main suppliers is formed.

- **Analysis of Potential Suppliers**

For the analysis of potential suppliers, a set of special criteria is defined that correspond to the characteristics of a particular FTA sample. As a result of the analysis of potential suppliers, a list of specific suppliers is formed, with which further work is carried out.

- **Choosing the Most Optimal Supplier**

For the final selection of a supplier, a special rating scale is developed that allows you to calculate its rating.

Before calculating the rating, it is necessary to perform the above method of ABC analysis of the purchased sample of VVT.

Here is an example of calculating the supplier's rating (table 1). Let's assume that you need to purchase a sample of a class a FTA, the absence of which is unacceptable. Accordingly, the criteria of reliability and delivery time will be put in the first place when choosing a supplier. The significance of the other criteria, established in the same way as the significance of the first, by expert means (table 1).

Table 1: Example of Calculating the Supplier Rating

Supplier Selection Criteria	Specific Weight of the Criterion	The Average Value of the Expert Assessment of the Criterion Value on a Ten Point Scale			Product of the Specific Weight of the Criterion on the Average Value of the Expert Assessment		
		The Supplier					
		№1	№2	№3	№1	№2	№3
1. Reliability and delivery time of the CST sample	0,25	7	9	5	2,1	2,25	1,25
2. Cost of the CST sample	0,25	6	7	4	1,5	1,75	1
3. Compatibility of the CST sample	0,15	8	7	5	1,2	1,05	0,75
4. Terms of maintenance and support of the SST sample	0,15	4	6	7	0,6	0,9	1,05
5. Coefficient of modernization of the SST sample	0,10	7	5	5	0,7	0,5	0,5
6. The financial condition of the provider	0,05	4	5	4	0,2	0,25	0,2
7. Supplier's ability to respond flexibly to new product orders	0,05	5	4	3	0,5	0,2	0,15
Subtotal:	1,00				6,2	6,9	4,9

Based on table 1, it can be seen that the most optimal and appropriate criteria is supplier №2.

To conduct an expert assessment, a group of experts is formed, consisting of at least 10 people with relevant experience and knowledge in this field, represented from the military administration, other state bodies related to the security sector, representatives of the military-industrial complex, including foreign, special scientific institutions and organizations, etc. (Vikulov, 2000)

The final rating value is determined by summing the products of the criterion's significance by its average expert rating value for this supplier. By calculating the rating for different suppliers and comparing the values obtained, they determine the best potential supplier (Semenenko, 2001).

This rating should be submitted for consideration by an internal Advisory body, which accepts the final choice of the supplier and, accordingly, the FTA sample (Shkurko, 2003).

The Procedure for Commissioning When Purchasing and Developing (Modernizing) FTS Samples

After determining the most optimal supplier, special tests must be carried out and, if the test results are positive, the procedure for commissioning this CST sample must be carried out (Toporov et al., 2016).

Organization of Final Tests and Decision-Making on the Equipment of Law Enforcement Agencies SST (Toporov et al., 2017)

Final tests are carried out in order to assess special and operational capabilities, check and confirm the tactical and technical characteristics of the product sample to the requirements of tactical and technical tasks in conditions as close as possible to real (military) operation, as well as to issue recommendations on the possibility of adopting the product for service (supply) and the feasibility of its industrial production (Toporov et al., 2017).

Procurement of FTS Samples Taken into Operation

The implementation of this function begins with negotiations, which must end with the formation of a contractual relationship, i.e. the conclusion of a contract. An essential part of this stage is economic calculations, since it is necessary to know exactly what certain works and solutions cost (travel expenses, training of specialists, transportation costs, forwarding and insurance, etc.). purchases are Completed by the organization of reception control (Popov, 2004).

Control of Supply

One of the important tasks of supply control is to control the quality of delivery, i.e., to account for the number of complaints and defects. Delivery control also includes tracking delivery dates (the number of early deliveries or delays), tracking order processing times, and transportation times (Mishchenko, 2004).

In the proposed approach, in the form of practical recommendations, a mechanism has been developed for supplying high-tech FTS samples to the state power structures, which allows, taking into account the impact of complex problems, to reduce the possible risks that may arise when choosing an unfair supplier, and to improve the quality of FTS samples taken into operation.

Also, to ensure the defense and security of the state, the necessary FTA based on economic pragmatism requires the development of a new and improve the existing Catalog of special standards for uniform presentation of information about high-tech products.

CATALOGING OF EQUIPMENT AND SPECIAL EQUIPMENT

Cataloging the FTS will allow you to save annually the cost of developing and purchasing products for state needs, reduce by several times the existing range of components, components and other supplies for state needs, as well as stocks in warehouses and bases without compromising the operation of equipment in state organizations. In addition, it will provide the necessary conditions for compatibility and integration of material and technical support of equipment at the interspecies

and interdepartmental levels, increase the efficiency of the functioning and interaction of participants in the order, development, production and operation of products for state needs. An example of building classes for a special standards catalog is shown in figure 1.

The catalog of special standards will include a list of available and necessary normative documents on standardization for items of equipment and special equipment, which allows you to familiarize the user with the list of existing normative documents, as well as the scope of their application.

Taking into account the specialization, the Directory of special standards, as well as to concentrate all standardization documents for goods and services in the interests of the power structures of the state information resource, offers one section of Catalog specific standards to include "National standards in industries" (Tarasov, 2020).

The structure of the special standards Catalog includes:

- Standardization industry;
- Types of dual-use products, processes and services used in the power structures of the state;
- Code according to the Interstate classifier of standards (ISS).

The Catalog of special standards will also include the section "Interstate special standards-GOST B". It should be noted that the state legislation in the field of standardization does not provide for this type of normative document.

To date, the international standards ISO 9000:2017 " quality management Systems. Main provisions and vocabulary of "and ISO 9001:2016" quality management Systems. Requirements", which reflect the world experience in quality management.

These standards form the basis of a new approach to quality issues. After all, the quality management system is designed for continuous improvement of activities, increasing the effectiveness of the organization. It is part of the management system.

It is proposed to use "standards of organizations" to develop a quality management system taking into account special specifics without the need for certification, that is, to structure the management system of state power structures by establishing internal procedures and describing them.

In the Catalog of special standards, it is proposed to include a section " Internal standards (standards of organizations)", which describes the procedures for the daily activities of state law enforcement agencies in the main areas.

According to the current legislation in the field of standardization of the Republic of Kazakhstan, the organization's standard is developed for products, processes or services and is not subject to accounting and registration in the register of the national standardization system. In this case, the procedure for developing, adopting, accounting, and applying standards of organizations is determined by the organization.

Thus, the Catalog of special standards will be the information resource where all internal standards can be taken into account

Figure 1

MECHANISM FOR EFFECTIVE USE OF BUDGET FUNDS ALLOCATED BY THE STATE

In the context of the increasing role of science in the solution of high-tech defense and security of the state, the task of meeting the needs of law enforcement agencies in equipment and special equipment has always been solved within certain resource constraints. However, in an environment where the needs of law enforcement agencies are objectively increasing in an increasingly complex and expensive (high-tech) FTA, the complexity of this task is also increasing.

Therefore, the decisions that determine the direction of material and technical policy today are based on the results of research conducted by both research institutions of law enforcement agencies and institutions to develop a mechanism for the effective use of budget funds allocated by the state.

In almost all leading countries, under the conditions of limited special budget, the main focus is on conducting special research and development work as a way to solve the problem of strengthening the technical equipment of power structures and preserving the military-industrial complex.

For effective use of budget funds allocated by the state, law enforcement agencies need to pay special attention and control to the budget planning process (Akkazieva, 2016).

Thus, the timely implementation of all planning procedures by officials will allow us to create a high-quality budget, which in turn will allow us to provide the law enforcement agencies with the necessary resources (FTS and special equipment) and, accordingly, increase their operational readiness.

For quality planning of the targeted use of the budget, it is necessary to determine the list of main activities to perform their functions and tasks, the need for resources, as well as the amount of funding for their implementation.

Accordingly, to identify the overall resource needs of law enforcement agencies, there are algorithms and planning mechanisms that need to be directed in a timely manner, organize interaction and monitor (Akhmetov, 2014).

The main problematic issues affecting the quality of budget planning of law enforcement agencies and ways to solve them can be:

- Uncertainty of aggregate needs for special products;
- After identifying problematic issues, priority areas of activity should follow, on the basis of which development roadmaps are developed (in General, this work is carried out very poorly or formally);
- Weak pre-budget work in the field on the development of technical specifications, which subsequently affect the determination of the price, for example, the acquisition, the FTA and the quality of budget execution in General.
- Weak interaction in the budget planning process between officials of structural divisions.

The main conditions that must be met in the budget planning process:

- There are rules of interaction between officials when planning the budget from the lower division to the higher management body;
- Determining the responsibility for the quality of budget planning of all officials involved in the planning process;
- Monitoring the implementation of activities in subordinate lower-level divisions and timely reporting to the higher-level management body on the subordination to take appropriate measures;
- Sufficient time for verification of the budget application by a higher management body (timely preparation and submission of the budget application);
- The budget application must be accepted and drawn up in two versions for the limit and for additional requirements, which will allow identifying the full need for budget funds for making management decisions in the future.

For high-quality formation of the draft budget for special needs, responsible officials for planning events must:

- Develop and approve technical specifications in a timely manner and send them to potential suppliers for receiving price offers;
- Conduct an analysis of the current situation in the areas of activity;
- Develop and approve roadmaps for development in the areas that will later guide the development of strategic documents (strategic plan, development programs, etc.).

These approaches to budget planning will increase:

- The level of reasonableness of expenses;
- Availability of resources (including FTAs);
- Planning of events;
- High-quality development of the allocated budget funds.

Effective use of budget funds allocated by the state to law enforcement agencies is primarily expressed in high-quality budget planning and budget execution. To do this, all officials, from the tactical level of management to the strategic level of management, need to approach the budget planning process in a timely and responsible manner (Gadzhinsky, 2001).

To prevent inefficient spending of budget funds, changes and additions to funding plans should be allowed only in the following cases:

- Clarification, adjustment and sequestration of the state budget;
- Allocation of funds from the state budget reserve;
- Allocation of funds by the decision of the first head of the state body or by the Commission under the Central office for budget review.

At the same time, allow additional financing needs to be carried out without consideration by the Commission for types of expenses that are mandatory, for example: for the payroll Fund, travel expenses, housing payments, execution of Executive documents, judicial acts, environmental insurance and payment of emissions for environmental pollution, etc (Mirotin et al., 2002).

In order to effectively use the budget funds allocated by the state for the purchase of FTS, the following mechanism and procedure for calculating the definition of needs are proposed:

- The State body (customer, recipient), based on the analysis of the material and technical equipment of the troops, taking into account the approved supply standards, determines the overall need for FTS to perform the assigned functions and tasks.

The total demand (hereinafter referred to as the Opnorma) is determined in accordance with the approved supply standards for the IWT (in – kind standards). After determining the overall need, the planned need for the FTA is determined According to the following theoretical calculation:

$$Ppvt=TDnorma - ((N- Nwrite-off)+N purchased), (1)$$

Where: Ppvt-planned requirement for the FTA;

TDnorma - the total demand in accordance with the approved natural norms (the norms of supply);

N - the number of FTS available according to the special property accounting data as of 01.01. the number of the current year;

Nwrite-off - the number of FTS subject to write-off according to the forecast of property write-off in the current year;

N purchased - the number of FTAs that are planned to be purchased in the current year according to the budget request (if there is an agreement, the quantity is taken from the agreement).

- Public authority (customer, recipient) after the definition of the plan's requirements in areas of SST is developed and approved policy document (Concept development FTA) and for its execution the implementation Plan for the planning period.
- Public authority (the developer) to draft the implementation Plan is a feasibility study with a phased equipment].
- The State body (developer) shall approve the draft plan of implementation of measures with economic justification in accordance with the established procedure with the interested state bodies.
- After approval of the draft action Plan, this document will be submitted to the state budget Commission (SBC) for consideration in accordance with the established procedure.
- After making a positive decision on the draft action Plan of the state budget Committee, this program document is approved in accordance with the established procedure.
- State bodies (recipients) on the basis of the FTA action Plan develop and approve technical specifications for the necessary products of the State special order for the corresponding planning period.
- Further, the formation of public order and planning of the project budget for the relevant planning period shall be in accordance with the applicable budget laws, Rules of formation, placement, implementation of state special and the pricing of products special public order, including making adjustments as necessary with the approval rates and costing them with the competition authority (Roger,2008).

The developed recommendations and theoretical calculations made it possible to determine the mechanism for effective use of budget funds, which ensures the implementation of the proposed system measures, allowing to establish a balance of interests of the customer and the performer, is complex, affecting not only the aspects of price formation, but also the interests of various economic entities (Baizakova,2013).

The transition to a mechanism for effective use of budget funds will significantly improve the quality of the planned documents being developed, the validity of the price, and the efficiency of spending budget funds allocated for the implementation of the state defense order.

MATHEMATICAL MODELING OF THE FUNCTIONING OF THE FLEET

One of the main directions of improving the logistics system is the development of methods, models and algorithms for information support of organizational and managerial decision-making. One of the most important functions of the logistics support system is to ensure and maintain the necessary level of readiness of equipment and special equipment in the units.

A General model describing the dynamics of changes in the availability of equipment, a separate unit can be built on the basis of considering the transitions between different States of the simulated system (Semenov, 2000).

There are several ways to determine the possible States of a simulated system:

We Distinguish an elementary state that represents all possible ordered sets of k elements of a set N (cars) consisting of n elements, i.e. it represents all placements of n elements by k . the Number of possible States is determined by the number of possible placements of n elements by k and can be defined as:

$$A_n^k = A(a_k^n) = \frac{n!}{(n-k)!} \quad (2)$$

Since k can take values in the range $0,1,\dots, n$, the total number of States is divided by the sum of these placement groups:

$$N_I = \sum_{k=0}^n A_n^k = \sum_{k=1}^N \frac{n!}{(n-k)!} \quad (3)$$

So, for $n = 6$ we get the total:

$$N_I = \frac{6!}{6!} + \frac{6!}{5!} + \frac{6!}{4!} + \frac{6!}{3!} + \frac{6!}{2!} + \frac{6!}{1!} + \frac{6!}{0!} = 1957$$

Groups of States with failed cars:

Table 2

Full readiness	$A_6^0 = 1$
With one faulty car	$A_6^1 = 6$
With two faulty cars	$A_6^2 = 30$
With three faulty cars	$A_6^3 = 120$
With four faulty cars	$A_6^4 = 360$
With five faulty cars	$A_6^5 = 720$
With six faulty cars	$A_6^6 = 720$

In most cases, in practice, such detailed information about States is not of interest. From the point of view of the readiness of the fleet, the question of which cars are in service or have failed is also of greater interest. In this case, an aggregated state is defined as a set of States, i.e. a combination of certain elements $C_n^k = C(c_k^n)$, which is an unordered subset of k elements from n and includes all ordered subsets a_k^n . In one aggregate state consists of the $k!$ primary elementary States, i.e. all substitutions of k selected elements. In particular, for $k=3$, the aggregate state includes $A_{lmp} (l < m < p)$ six elementary States:

$$A_{lmp} = \{A_{[lmp]}, A_{[lpm]}, A_{[mlp]}, A_{[mpl]}, A_{[plm]}, A_{[pml]}\} \quad (4)$$

Then the number of possible States of the system represents the sum:

$$\sum_{k=0}^N C_n^k = \sum_{k=0}^n \frac{n!}{k!(n-k)!} \quad (6)$$

For $n = 6$, we get:

$$\frac{6!}{0!6!} + \frac{6!}{1!5!} + \frac{6!}{2!4!} + \frac{6!}{3!3!} + \frac{6!}{4!2!} + \frac{6!}{5!1!} + \frac{6!}{6!0!} = 64$$

In some cases, for example, when the fleet consists of the same type of vehicles, readiness is determined by the number of serviceable (or faulty) cars. This more enlarged consideration assumes the next level of aggregation of States by groups at $k = 0, 1, \dots, n$. Each of the considered aggregated States with k faulty cars is a group of aggregated States, each of which in turn is a group of $k!$ primary States (Melik-Gaikazyan, 2001).

For example, a single aggregated state with three failed cars is a group of aggregated States, each of which in turn represents a set of corresponding elementary States:

$$A_{III} = \left\{ \begin{array}{cccccccccc} A_{123}, & A_{124}, & A_{125}, & A_{126}, & A_{134}, & A_{135}, & A_{136}, & A_{145}, & A_{146}, & A_{156}, \\ A_{234}, & A_{235}, & A_{236}, & A_{245}, & A_{246}, & A_{256}, & A_{345}, & A_{346}, & A_{356}, & A_{456} \end{array} \right\} \quad (7)$$

Each of the enlarged States A_k includes aggregated C_n^k and elementary A_n^k States.

Direct transitions between adjacent States are caused by flows of events associated with the occurrence of failures of individual cars and are quantitatively described by the intensity of flows λ_i (failures of the i -th car).

For each vehicle, the intensity of the fault-related event flow λ_i is a value that can be determined based on the analysis of vehicle breakdown statistics. In a real situation it seems appropriate to evaluate the intensity of the flow of breakdowns with an empirically based function:

$$\lambda_i = f(R_i, T_i, L_i, W_i, C_i) \quad (8)$$

Where R is the type of car, T - age L - the mileage of the car, W - road and climatic conditions.

Reverse transitions between adjacent States are determined by the fluxes of the events associated with the Troubleshooting in the process of repair and maintenance. Quantitatively, reverse transitions are described by the intensity $\mu_{i/ij, \dots}$ of the recovery flows of the i -th car in the case of other failed cars with the corresponding numbers $\{j, \dots\}$. The intensity of the recovery flow for each vehicle in a particular system state can be calculated based on a specified algorithm for prioritizing the order of service (repair) by a limited number of repair teams and spare parts.

CONCLUSIONS

The development of a mechanism for supplying high-tech equipment and special equipment to law enforcement agencies remains relevant in the light of the requirement to create a system of logistics for ensuring the security of the state and contributes to the development of the country's economy.

Based on this, the first priority within the highly technical defence and state security on the basis of economic pragmatism, development of supply mechanism, high-tech samples of SST, projects Catalogue special regulation of the machinery of efficient use of budget funds allocated by the state using an integrated approach at this stage to implement the procurement processes of power structures of high-tech samples of SST.

One of the main functions of the high-tech support system is to ensure and maintain the readiness of equipment and special equipment. A model of the functioning of a fleet of special equipment is proposed that describes the dynamics of changes in readiness based on the consideration of forward and reverse transitions in the possible States of the simulated system that differ in the degree of readiness.

The implementation of the above measures contributes to the development of a special state security organization for equipping and staffing the FTS, which will increase the operational readiness of law enforcement agencies, as well as the development of the domestic military-industrial complex. All this is not possible without creating a model for managing this process.

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REFERENCES

1. Arkhipova N. I., V. V. Kulba, S. A. Kosyachenko, F. Yu. Chanhieva. *Research of management systems: Textbook.manual for universities*. - M.: Prior, 2002. - 384 p.
2. Arkhipova N. I., kulba V. V., Kosyachenko S. A. et al. *Organizational management: Studies.Handbook for universities*. M.: Prior, 1998. - 448 p.
3. Akkazieva, G., 2016. *Politika NATO v Tsentralnoy Azii: osnovnye napravleniya i priority (The NATO 'spolicyin Central Asia: main directions and key priorities)*. Vestnik KRSU 16 (6), 112-116.
4. Akhmetov A., 'Energy Ministry Official on Ukraine' Readiness to Purchase Gas From Kazakhstan', Tengrinews, 8 November 2014, http://en.tengrinews.kz/politics_sub/Energy-Ministry-official-on-Ukrainesreadiness-to-purchase-gas-from-Kazakhstan-257526/ (accessed 20 November 2014).
5. Author interview with Kazakhstanian and NATO defence officials, November 2007, June 2008.
6. Armament and economy # 3 (11) 2010 Electronic scientific journal [Electronic resource] // <https://sc.mil.ru/files/morf/military/archive/ecco11.pdf>. (Accessed 18.01.2020).
7. About the product cataloging system [Electronic resource] / / <https://cals.ru/sites/default/files/downloads/mdocs/catalog.pdf>. (Accessed 19.01.2020).

8. Baizakova (2013) *Regional Security Cooperation Between the Republic of Kazakhstan and the European Union*, Russian Politics & Law, 51:1, 88-95, DOI:10.2753/RUP1061-1940510106 // <https://doi.org/10.2753/RUP1061-1940510106>
9. Babenkov A.V. *Methodological approaches to the military-economic justification and assessment of the parameters of logistics processes in the system of material and technical support of troops*. Article. *Proceedings of the Russian Academy of rocket and artillery Sciences*. 2016. No. 1 (91). Pp. 25-31.
10. Bowersox Donald J., Kloss David J. *Logistics: integrated supply chain* / TRANS. from English-M.: ZAO "Olymp-Business". 2001 – - 214 p.
11. *Building analytical models. Forms of analytical models: verbal, graphic and mathematical* [Electronic resource] // <https://cyberpedia.su/14x1900.html>. (Accessed 21.01.2020).
12. *Cataloging products. State Committee for standardization of the Republic of Belarus*. - <https://gosstandart.gov.by/cataloging-and-classification>.
13. *Catalog of supplies of the Armed Forces of Russia as an object of interdepartmental information interaction* [Electronic resource] / / <https://dfnc.ru/oboronzakaz/katalog-predmetov-snabzhenia-vooruzhennyh-silrossij-skoj-federatsii-kak-obekt-mezhvedomstvennogo-informatsionnogovzaimodejstviya/> (accessed 21.01.2020).
14. *Electronic catalogs and lists for exported military products. Structure, presentation format, and order of data exchange. Guidelines* [Electronic resource] / / <https://cals.ru/sites/default/files/downloads/mdocs/catalog.pdf>. (accessed 20.01.2020).
15. Gadzhinsky a.m. *Logistika*, Moscow: Publishing and bookselling center "Marketing", 2001, 209 p.
16. *Information system for cataloging products and its participants* [Electronic resource] // https://i5.memst.kz/content/detail.php?ELEMENT_ID=7094 (accessed 23.01.2020).
17. Jones, David A., and Hanzhen Liu. "Changing Face of Europe: the Projected Impact on Europe's "Core" and "Periphery" of Chinese FDI into the CEEC Region." *International Journal of Economics, Commerce and Research (IJECR)* 8. 5, Dec 2018, 13-32
18. Mirotin L. B., tashbayev Y. E. *logistics for an entrepreneur: basic concepts, provisions and procedures*. - Moscow: INFRA-M, 2002. P. 184.
19. Kozhamkulova Zh. T., Uruzbaeva N. A., Tulembayeva A. N. *Commercial entrepreneurship*. - Almaty: Kazakuniversiteti, 1999. - 289 p.
20. Korovkin I. A., Karnauskin Yu. V., Kartashev A. B. *Cataloging of products for Federal state needs* // *Standards and quality*, 2000, No. 5.
21. Makarov V. L., Levin M. I., Rubinov a.m. *Mathematical models of economic interaction and equilibrium*. - Moscow: Nauka, 1993. -373 p.
22. Melik-Gaikazyan P. V., Melik-Gaikazyan M. V., Tarasenko V. F. *Methodology of modeling nonlinear dynamics of complex systems*. - Moscow: FIZMATLIT, 2001. -272 p.
23. *Military-economic analysis* // edited By S. F. Vikulov. - M.: Voenizdat, - 2000. Pp. 31-34.
24. Mishchenko C. B., Ponomarev C. B., Ponomareva E. S., Evlakhin R. N., Mozgova G. V. *History of Metrology, standardization, certification and quality management*. Tambov, TSTU Publishing house, 2004.
25. Napolsky G. M. *Technological design of motor transport enterprises and service stations — 2nd ed. pererab. and add.* - M.: Transport, 1993. - 271 p.

26. Nikaido X. *Convex structures and mathematical Economics-M-1972.*
27. Pavicevic, Marko, and Antonis Polentas. "The Aspects of Trumps China Strategy." *International Journal of Political Science, Law and International Relations (IJPSLIR)* 8, 4, Dec 2018, 11-20
28. Popov M. *Main directions of construction of the armed forces abroad.* // *Foreign military review.* 2004. No. 1. P. 8.
29. Roger N. McDermott (2008) *United States and NATO Military Cooperation with Kazakhstan: The Need for a New Approach,* *Journal of Slavic Military Studies,* 21:4, 615-641, DOI:10.1080/13518040802497374//<https://doi.org/10.1080/13518040802497374>
30. *Regulation on the interstate system of cataloguing supplies of the armed forces of the member States of the collective security Treaty Organization [Electronic resource] / / https: / / mkves.odkbcto.org/news/regulations/polozhenie_o_mezhgosudarstvennoj_sisteme_katalogizacii_predmetov_snabzheniya_15/ (accessed 22.01.2020).*
31. *Regulations on the Working group on cataloging supplies of the armed forces of the CSTO member States under the Interstate Commission on military and economic cooperation of the collective security Treaty Organization [Electronic resource] // https://mkves.odkb-csto.org/news/catalog/polozhenie-o-rabochey-gruppe-po-katalogizatsii-predmetov-snazheniya-vooruzhennykh-sil-gosudarstv-ch/(accessed 22.01.2020).*
32. Saraswat, Pranav., and Jatin. Banga. "Volatility of Sensex with respect of Union Budget of India: A pragmatic study." *Transstellar International Journal of Accounting and Financial Management Research* 2.1 (2012): 19-31.
33. Stepanov V. I. *Material and technical supply: textbook. manual / V. I. Stepanov. - M.: Academy, 2009. - 192 p. logistics: textbook / A. N. Tulembayeva. - 3rd ed., ISPR. and add. - Almaty: Triumph "T", 2008. - 358 p.*
34. Semenenko A. I., Sergeev V. I. *Logistics. Fundamentals of the theory.* Saint Petersburg: Soyuz, 2001, 544 p.
35. Semenov M. I., I. T. Trubilin, V. I. Loiko, etc. *Under the editorship of I. T. Trubilin. Automated information technologies in Economics: Textbook for students.* Moscow: Finance and statistics, 2000, 368 p.
36. Shkurko Yu. M. *Methodical apparatus of military-economic analysis of construction activities of the armed forces* // *Military science and defense policy,* 2003, No. 2, Pp. 14-16.
37. Supriatna, Encup. "Modernization and Existence of Madrais Teaching Groups: Case Study in District Cigugur Kuningan Regency, West Java." *International Journal of Human Resource Management and Research (IJHRMR)* 7.1 (2017): 1-4.
38. Tarasov A. P. *Why do I need cataloging? [Electronic resource] / / https:// katalit.ru/ uploads/ 6Tarasov. pdf. (accessed 20.01.2020).*
39. *Transition of Russia to the 2nd level in the international cataloging system [Electronic resource] // https://katalit.ru/index.php/news-archive/136-perekhod-rossii-na-2-j-uroven-v-mezhdunarodnoj - sisteme - katalogizatsii-v-chasti - eksportaimportaproduktsii – zavershen(accessed 20.01.2020).*
40. Toporov A.V., Babenkov V. I. *Substantiation of conceptual approaches to the assessment of the military-economic efficiency of the material and technical support system of the group of troops (forces) / Issues of defense equipment. Series 16: Technical means of countering terrorism.* 2016. no. 9-10 (99-100). Pp. 110-114.
41. Toporov A.V., Babenkov V. I. *Justification of criteria for evaluating the military-economic efficiency of the processes of material and technical support of troops (forces)/ Proceedings of the Russian Academy of rocket and artillery Sciences.* 2017. No. 1 (96). Pp. 23-28.

42. *Toporov A.V., Babenkov V. I. Methodological bases of military-economic efficiency of the integrated system of material and technical support. Proceedings of the Russian Academy of rocket and artillery Sciences. 2017. No. 4 (99). Pp. 13-22.*
43. *The Inventory of weapons and military equipment is being developed in Kazakhstan.- https://asker.kz/blog/army_kazakhstan/183.html.*