

SYSTEMATIC ORGANISATION OF UKRAINE'S MILITARY-TECHNICAL AND DEFENCE-INDUSTRIAL POLICY

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Summary

This article examines the theoretical and organisational foundations of state management of military-technical policy. An institutional model of the state management system in this sphere is proposed. The article justifies the advisability of treating military-technical policy as an integrated management system within the defence sector. It identifies the interconnection between the organisational structure of state management bodies and the mechanisms for formulating and implementing military-technical policy. It demonstrates that the coherence of institutional mechanisms and the functional distribution of powers contributes to enhancing the effectiveness of activities in the defence sector. The areas of interaction between military-technical policy and other components of the national security and defence system are outlined. Recommendations are provided for improving state management of military-technical policy, aimed at ensuring balance, efficiency and coordination in the implementation of defence programmes.

Key words: public administration, military-technical policy, defence-industrial policy, organisational structure, military-economic system, armaments and military equipment.

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1. Introduction

In the face of armed aggression and constant security challenges, Ukraine is compelled to undertake far-reaching reforms in its military-technical and defence-industrial policies. These policies play a decisive role in maintaining the country's defence capability, as the ability to deter external threats depends directly on the reliability, strength and modernity of the defence-industrial complex.

The organisation of military-technical policy involves a comprehensive approach to the development, production and modernisation of armaments, taking into account the latest

technologies and the experience of international partners. Defence industry policy focuses on strengthening the industrial base capable of meeting the needs of the Armed Forces of Ukraine, creating conditions to attract investment and stimulating the production of dual-use goods.

At the same time, the role of military-technical policy is not sufficiently specified in defence policy and strategic documents, leading to systemic gaps between the expected outcomes of the state's defence preparedness as defined by legislation and the actual state of defence capability. A significant part of these discrepancies is linked to the inefficiency of the state management system for defence preparedness in the context of full-scale war, as well as to shortcomings in the organisation and development of the domestic defence-industrial complex, which require urgent reform.

The aim of this article is to justify the organisational structure of the system of state management of military-technical and defence-industrial policy.

2. Theoretical Foundations of Military-Technical Policy

The primary tasks of the state administration body in the defence sector and in the implementation of military-technical policy are to bring it into line with the relevant conditions—which include the objectives, tasks, organisational structure, composition and operational mechanisms of the military-technical policy system—as well as to monitor documents, in particular regulatory and legal documents, developed by participants in military-technical activities for approval at the drafting stage. This will facilitate a clearer understanding of the content of documents, in the drafting and use of which many officials may be involved. Overall, this will help to steer the development of military-technical policy towards the future, create new favourable conditions for its successful development and implementation, as well as for conducting research on higher-order systems of which military-technical policy forms a part. Identifying the sphere of interaction with other systems is of profound significance for military-technical policy, as the state of interacting systems can either facilitate its successful functioning or hinder it. Therefore, military-technical policy can be viewed as a specific outcome of the interaction of many systems, which, in turn, are subject to the limited influence of military-technical policy; this, in turn, can enhance the effectiveness of each of the systems interacting with it. Military-technical policy interacts with several systems that play an important role in its formulation and implementation.

The main ones are:

1. Government bodies: ministries, departments and agencies responsible for defence, security and foreign affairs play a key role in shaping military-technical policy and ensuring its implementation.
2. Military structures: the Armed Forces of Ukraine and other military formations that require new technologies and weaponry to carry out their tasks.
3. Research and development institutions: organisations engaged in the development of new technologies, scientific research in the field of military technologies and their implementation in production.
4. Defence industry: manufacturers of weapons and military equipment who implement the requirements of military-technical policy through the production and supply of relevant products.
5. International organisations and alliances, such as NATO, the EU and the UN, which can influence military-technical policy through their recommendations, joint projects and cooperation programmes.

6. The civilian sector: companies engaged in research and development in technologies that can be used in the military sphere, particularly in the fields of information technology, cybersecurity, etc.

7. The education and training system: universities and other educational institutions that train specialists in the fields of military technology, defence and security.

8. Civil society organisations and think tanks: these can influence the formulation of military-technical policy through research, expert analysis and advocacy.

The interaction between these systems is critical to the successful implementation of military-technical policy and to ensuring the country's defence capability.

When improving the system of state management of military-technical policy by introducing systemic principles into its organisational forms, several methods may be employed. However, when viewing this process as the study of a specific sequence of actions, it is advisable to adopt an approach that recommends, when creating or improving a management system, proceeding from the need to implement a comprehensive organisational task. This task consists of exerting a differentiated and interrelated managerial influence on the participants in military-technical policy with the aim of achieving each of the major objectives and determining which part of these influences is carried out by a particular unit of the system. In other words, the established set of management bodies must be capable of performing their functions in full across all spheres and levels of the military-technical policy system, with a clear division of responsibility for the results of their activities (*Smirnov et al., 2014*).

3. Organisational structure of the state management system for military-technical policy

The management bodies of the control system should comprise three levels: the first – the highest body for the management of military-technical policy; the second – a set of bodies managing specific areas, which should be divided into two groups (within the Ministry of Defence and the General Staff of the Armed Forces of Ukraine); the third – third-level structures (defence industry enterprises). Taking into account the need to adhere to the principle of full organisational responsibility, the highest military-technical policy management body must be able to manage the development and implementation of military-technical policy in all its spheres, with each of these spheres being considered a management function of the system's highest body. These spheres do in fact exist, although some of them are divided into areas of activity of management bodies and administrative structures, and do not have bodies specifically created to manage these spheres.

The creation of a unified system comprising the US Air Force and Air Defence Forces can be regarded as a striking and effective outcome of an objective, long-term military-technical policy. The successful resolution of this issue depended on establishing the technical foundation for a unified command and control system for forces and assets. Work on creating and improving the functioning of the new system took several decades and required significant resources. The objectives set were achieved. This was only possible within the framework of an objective long-term military-technical policy, underpinned by the objective results of scientific research (*Smirnov et al., 2014; Zubarev et al., 2019*).

The highest governing body responsible for state activities in the military-technical sphere could be called the "Military-Technical Policy Management Body". It would be advisable for this body to comprise specialists organised into separate units capable of performing the full range of management functions – a kind of headquarters whose task is to ensure that the highest-ranking official in Ukraine – the President of Ukraine – is able to pursue an effective

military-technical policy. Therefore, the “President of Ukraine – management apparatus” link can be viewed as a line-and-staff structure, which fully captures the essence of this link. In this context (*Zubarev et al., 2019*):

the composition of the administrative apparatus and the scope of its responsibilities (areas of military-technical policy) are aligned;

this structure enables the establishment of a hierarchy of military-technical policy management bodies with a clear division of functions at all levels, from the bottom up, and the ability to ensure an appropriate degree of centralisation in decision-making;

the structure of the management system makes it possible to have specialists within the management units who perform functionally related tasks;

the proposed management apparatus creates conditions for eliminating parallelism in the activities of management bodies and duplication of their work throughout the entire management system;

the management system is suited to both peacetime and wartime conditions and does not require significant restructuring when these change;

the management system meets the basic system-technical requirements for any state management systems; it is a subsystem of a higher-order system – the management of the state’s military security – and can successfully interact with other state systems involved in military development and the organisation of Ukraine’s defence, whilst maintaining its unity and integrity;

The management apparatus centralises a full range of functions, making it possible to establish organisational structures at other levels of the hierarchy to perform their sub-functions and, as a result, to create a strict vertical chain of command and the conditions for establishing common goals and objectives for all structures within the military-technical policy system. This allows for the standardisation (unification) of the system of management bodies, the application of standard, unified and standardised elements of management structures, unified staffing levels, automated management tools and systems, and software. It also enhances the management system’s ability to alter its functions, composition and structure without compromising its effectiveness, and enables the creation of a unified information space for military-technical policy, including a unified database of regulatory and legal documents as a component of the information space within the state’s military security sphere.

4. Organisational structure, mechanisms and directions for the development of the state management system for military-technical policy

The management of military-technical policy, as a single, integrated system, forms the basis for the structure of the state management system and has many facets. The relationship between the organisational structure of state management of military-technical policy and the development of its theory contributes to successful activity in the military-technical sphere. Theory should serve as a roadmap for the development and implementation of Ukraine’s military-technical policy (its goals, objectives and content) and for structuring its system (composition, organisational structure and mechanism of operation). Theory develops when the object of study constitutes a unified system of its elements and when it is distinct from other systems. Military-technical policy today must be based on scientific knowledge, which once again underscores the importance of theory as the source of this knowledge. Key to the formation and development of the theory is the incorporation of systemic principles, according to which military-technical policy must be based as a single, coherent system. Only a systematic

methodology – the foundation of the theory – can provide the theoretical basis for improving military-technical policy, reveal its key links and relationships with other components of a state's military security, and create the conditions for successfully addressing the practical challenges of military-technical policy. Systemic methodology has proven its clear superiority over other approaches in structuring the functioning of any sphere of human activity and the environment, including state governance, science, education, the economy, military affairs, and so on (*Begma et al., 2020*).

An important area of military-technical policy is a country's system of armaments and military equipment, which is developed using a systematic methodology (*Zubarev et al., 2019*). An analysis of the combat capabilities of W&E models, complexes and systems being supplied to the armed forces of developed countries indicates that they are becoming increasingly integrated – each individual W&E model, complex or system is developed as an element (sub-system) of higher-order W&E systems, and their combat effectiveness is determined by their contribution to the effectiveness of these systems. Each new model of military equipment will be the next step in transforming the totality of military equipment of any military formation, including the Armed Forces and other components of the country's defence forces, into a single, integrated information system.

The basis for this development of military equipment lies in new information technologies and the computerisation of military units. These circumstances have facilitated the development of the concept of a network-centred warfare system, characterised by the comprehensive computerisation of armed forces and their integration into unified, coherent information-strike combat systems based on new information and computer networks. The military technology system of the future, built using the core ideas of network-centred warfare, or any other highly integrated system, the fundamental principles of which bring about radical changes in the forms and methods of armed combat (*Chepkov et al., 2014; Begma et al., 2020*).

The system of state management of military-technical policy, in addition to the highest governing body – the military-technical policy apparatus – comprises management structures (entities) distributed between the Ministry of Defence of Ukraine (MOD) and the General Staff (GS) of the Armed Forces of Ukraine (Fig. 1). These management structures may perform the following functions (*Yekhanurov, 2019*):

The Ministry of Defence and the General Staff of the Armed Forces – responsible for the management of the systematic development of military equipment and the technical provision of military units. Defining the future military equipment system, developing its key characteristics and core requirements for models, complexes and systems of military equipment under development and modernisation; setting tasks for defence industry enterprises regarding the development, creation and production of new military equipment; monitoring the operations of defence industry enterprises regarding the fulfilment of the military equipment customer's tasks;

General Staff – management functions relating to the logistical support of military operations, the operation of military equipment in peacetime and wartime, and the professional military and technical training of personnel of the Armed Forces of Ukraine;

Ministry of Defence of Ukraine – management functions relating to the design, development and production of military equipment, the development of new military technologies and their implementation.

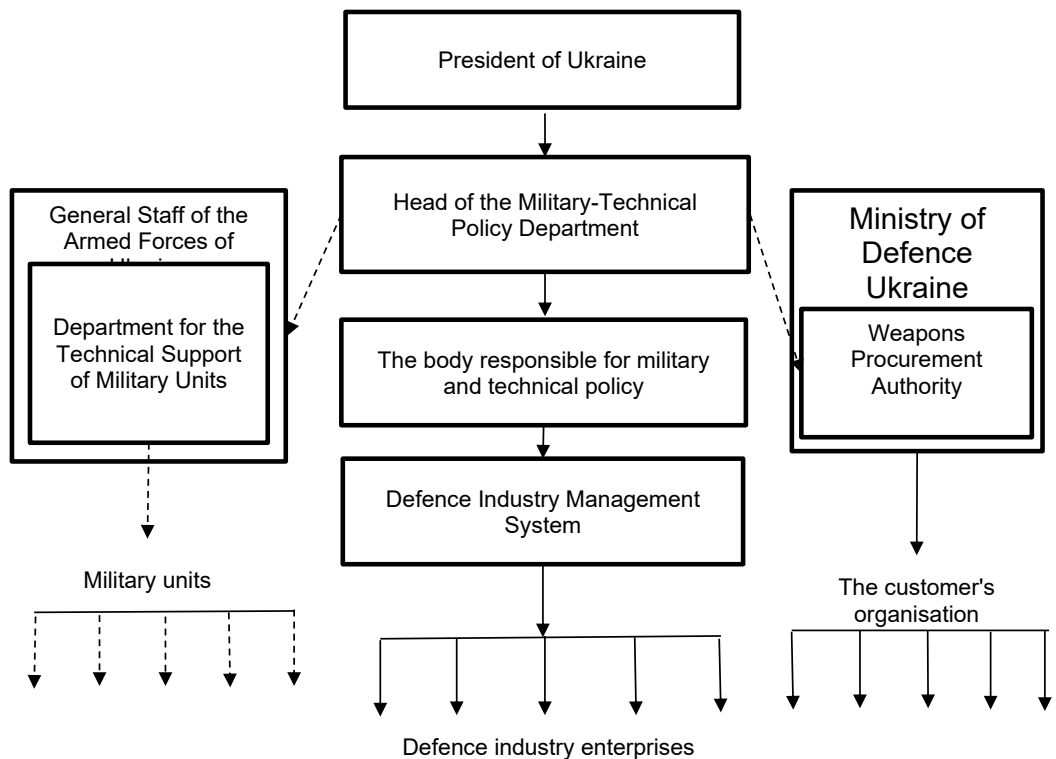


Figure 1. Schematic diagram of the organisational structure of the state system for managing military-technical policy (prepared by the author)

Ukraine's military-technical and defence-industrial policies are currently key components of its overall national security and defence strategy. Amid a complex geopolitical situation, constant threats and military conflicts on its borders, Ukraine is focusing its efforts on strengthening its defence capabilities by modernising its defence industry, integrating with international partners and introducing innovative military technologies.

The main challenges remain the need to reform and streamline the organisational structure of the defence industry, to create conditions for the development of the public and private sectors operating in the field of military technology, and to align with NATO standards. The development of public administration in this area must ensure effective coordination between the various bodies responsible for security and defence, research institutions and manufacturing enterprises.

Another key priority is ensuring the financial stability and transparency of defence procurement processes, as well as focusing on the training of highly qualified personnel. Investment in research and development, the development of dual-use technologies, and the strengthening of cyber defence are critical to enhancing defence capabilities.

Overall, the successful implementation of military-technical and defence-industrial policy requires a comprehensive approach that will ensure the resilience, modernisation and enhancement of the technological capabilities of Ukraine's defence sector in the face of contemporary challenges.

5. Conclusions

Thus, the advantages of the proposed organisational structure within the system of state management of military-technical policy should be considered as follows:

- the leading role accorded to military-technical policy within the new structure, combined with other organisational measures, is the only means capable of initiating the process of its development. Military-technical policy will begin to take shape and be implemented as an important component of state policy in the field of military security;

- the possibility of a balanced consideration within military-technical policy of the political, military, economic, resource-related, moral, cultural, social, educational and other interests of the state, society, various population groups and individual members;

- the ability to rapidly establish effective methods for the state's activities in the military-technical sphere and its components, including the development, creation and production of new models, complexes and systems of military equipment, taking into account global trends in their development and the development of the global defence industry;

- coordination of the activities of executive bodies, ministries and departments in the military-technical sphere through decrees, instructions and orders issued by the highest-ranking official of Ukraine in real time;

- the ability to establish a unified state policy on key military products and the resources required for their production within the agreed timeframe;

- strengthening the influence of military-technical policy on the interaction between related systems – military and civilian education, the development of infrastructure in key areas of military-technical policy, personnel training, etc.;

- reducing the expenditure of all types of resources on the development and implementation of military-technical policy by minimising duplication and parallel work and activities in its individual sectors;

- creating better conditions for utilising global trends in the development of military-technical equipment;

- establishing a balanced unity within the organisational structure of the state administration system, encompassing both formal and informal structures, with the expectation of reducing corruption in the military-technical sphere.

The above constitutes an important component of ensuring the state's military security, and the defence industry must meet Ukraine's defence needs in a timely and high-quality manner, in the specified quantities and in accordance with the approved product range.

Further research should focus on improving efficiency, ensuring security and enhancing the competitiveness of the Ukrainian defence industry in the context of Ukraine's post-war reconstruction.

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