The Central Research institute
of the Armed Forces of Ukraine

Military Science. Vol. 3 No. 1 (2025)

Vulnerability as a Consequence of Underestimation: The Evolution of the Armed Forces of Ukraine and the Preconditions for a Large-Scale War

Anatoliy Bargilevych
Candidate of Military Sciences
Inspector General of the Ministry of Defence of Ukraine
Apparatus of Defence Ministry of Uapparatus
6, Povitrianykh Syl Avenue, Kyiv, 03168
e-mail: A.barhilevych@mil.ua
ORCID: 0000-0002-4799-0908

Oleksiy Shevchenko
Candidate of Historical Sciences
Deputy Chief of the General Staff of the Armed Forces of Ukraine
General Staff of the Armed Forces of Ukraine
6, Povitrianykh Syl Avenue, Kyiv, 03168, Ukraine
e-mail: shevchenko_om@asv.gov.ua
ORCID: 0000-0003-0734-6533

Yuriy Kliat
Candidate of Technical Sciences, Docent
Commandant of the Central Research Institute of the Armed Forces of Ukraine
Central Research Institute of the Armed Forces of Ukraine
28 B, Povitrianykh Syl Avenue, Kyiv, Ukraine 03049
e-mail: klyatt@ukr.net
ORCID: 0000-0002-8267-3748

Alexey Solomytsky
Doctor of Military Sciences, Senior Researcher
Chief of Section - Deputy Head of Directorate
Central Research Institute of the Armed Forces of Ukraine
28 B, Povitrianykh Syl Avenue, Kyiv, Ukraine 03049
e-mail: solosa1@gmail.com
ORCID: 0000-0001-8061-8895

Abstract. The analysis of the stages of development of the Armed Forces of Ukraine is an important aspect of the study of the military capability of the state in the context of geopolitical changes and security challenges. The relevance of the topic is stipulated by the need to assessing the effectiveness of reforms and strategic decisions that have influenced the size, structure and combat capabilities of the Armed Forces of Ukraine throughout the history of independence. The study is

especially important in the context of growing threats to national security and the need to adapt the Armed Forces of Ukraine to modern challenges.

The study uses a comprehensive approach, including methods of historical analysis, statistical data processing, comparative analysis of changes in the number of personnel, structural transformations, financing and staffing levels. The methods of retrospective study of the dynamics of military reforms are also used. Based on the analysis, five key stages of the transformation of the Armed Forces of Ukraine are identified: the period of formation (1991-1996), the stage of gradual reorganisation (1997-2004), the transition to a professional army and adaptation to NATO standards (2004-2010), the period of critical reduction in numbers and resources (2010-2014), and recovery and active development (2014-2022). Considerable attention is paid to the consequences of reforming the structure of command and control, the impact of the reduction in numbers on combat capability, and the role of newly created military units and operational commands in ensuring the defence capability of the state. It is determined that the reduction in numbers and resources has led to a weakening of the strategic capabilities of the Armed Forces of Ukraine, especially in terms of ground and air defence, which became a critical factor in 2014. The challenges associated with the transition to the J(G) command structure, adaptation of NATO standards to, and redistribution of tasks between military leadership bodies are investigated.

The article will be useful for military experts, analysts, defence managers, security researchers, and decision-makers on further modernisation of the Armed Forces of Ukraine.

Keywords: Armed Forces of Ukraine, military reform, number of troops, NATO standards, combat capability, military management, defence capability, military threats.

Introduction

The Armed Forces of Ukraine (AFU) are the main guarantor of national security and sovereignty. Since the declaration of independence in 1991, they have undergone a difficult path of transformation, which included stages of reduction in numbers, reorganisation of command structures, adaptation to North Atlantic Alliance (NATO) standards and building up combat capabilities in response to military threats. A particularly key factor in the development of the Armed Forces of Ukraine was the change in the military-political situation, in particular the armed aggression of the Russian Federation, which has been ongoing since 2014 and reached its peak in 2022.

Analysing the reform processes of the Ukrainian army is of critical importance for assessing the effectiveness of the changes, identifying the strengths and weaknesses of the military establishment, and formulating further development strategies. Over the past decades, the Armed Forces of Ukraine have undergone significant changes that have affected not only their numerical composition, but also their organisational structure, military command and control system, provision of weapons and equipment, personnel policy, and military and economic potential.

In view of the above, a comprehensive analysis of the main stages of development of the Armed Forces of Ukraine, identification of key reform trends, as well as assessment of the impact of changes on the combat capability of the troops, study of the evolution of the size, structure and organisational transformations of the Ukrainian army, and the main legislative and strategic decisions that determined the direction of military policy are relevant issues.

Literature review

In the course of researching the stages of development of the Armed Forces of Ukraine, a number of scientific works were analysed, covering various aspects of the formation and reform of the Ukrainian army, including the processes of formation of the Armed Forces of Ukraine after the collapse of the USSR, the role of political movements and organisations in the creation of the national army [1], the processes of reducing the number of troops, reorganising operational

commands and adapting to international treaties [2-6], as well as the results of defence reviews in Ukraine [7-8] and foreign experience in these areas [9-10].

Methodological Framework

The study is based on a comprehensive approach that combines historical and retrospective, comparative, statistical, regulatory and legal analysis, a systematic approach and the method of expert evaluation. The use of historical and retrospective analysis made it possible to trace the key stages of development of the Armed Forces of Ukraine, to identify the main trends and factors that influenced the state's military policy. Comparative analysis helped to assess the effectiveness of military reforms in different periods and compare Ukraine's experience with similar processes in other countries. The use of statistical methods helped to systematise data on the size, funding, logistics and staffing levels of the army. The regulatory and legal analysis helped to examine the legislative acts and strategic documents that determined the directions of reforming the Armed Forces of Ukraine, including changes in military doctrine and legislation on the size and financing of the army. The systematic approach ensured that the development of the armed forces was considered as a holistic process, including changes in the structure of military command and control, combat readiness and operational capabilities. The method of expert evaluation helped to determine the effectiveness of the reforms and the prospects for further improvement of military management and combat capabilities of the Armed Forces of Ukraine. The combination of these methods made it possible to conduct an objective analysis of the transformation of the Ukrainian army, identify problematic aspects of its development and formulate recommendations for further modernisation in line with current challenges.

Results

During most of the years of independence, the Armed Forces of Ukraine were reformed, which resulted in a reduction of almost 4.5 times compared to the initial period of Ukraine's formation, namely from 906535 peacetime staff to 165477 staff positions and 149457 enlisted personnel by 2014 (Figure 1).

Decisions on the reduction of the Armed Forces of Ukraine were made at the state level by resolutions of the Verkhovna Rada of Ukraine and the Law of Ukraine "On the Number of the Armed Forces of Ukraine", with the escalation of the reduction occurring after Ukraine's high-profile military and political successes. The adoption of the first and second editions of the Military Doctrine of Ukraine in 1993 and 2004 marked the beginning of a new stage of the Armed Forces reduction.

After 2014, with the change in the military-political situation inside the country and the growing threats to Ukraine's national interests, it became necessary to significantly increase the number of the Armed Forces of Ukraine and their combat potential to repel Russian aggression. As of 01.01.2022, the number of the Armed Forces of Ukraine was 322821 positions (including 277124 military positions and 45697 employees of the Armed Forces of Ukraine), and 251802 people (including 207017 military personnel and 44 785 civilian employees of the Armed Forces of Ukraine).

At the same time, from 2015 to 2021, the staffing of the Armed Forces of Ukraine averaged 70-75% (of which 66-73% were military personnel and 95-98% were employees of the Armed Forces of Ukraine).

It should be noted that the number of personnel did not exceed the number established by the Law of Ukraine of 2015 (as amended) "On the Number of the Armed Forces of Ukraine", which from 01 January 2022 was 26,000 people, including 215,000 military personnel.

Although this was due to the lack of motivation of the population to serve in the Armed Forces of Ukraine, it allowed to maintain a critically small number of the Armed Forces of Ukraine, whose staffing needs exceeded the number defined by the Law.

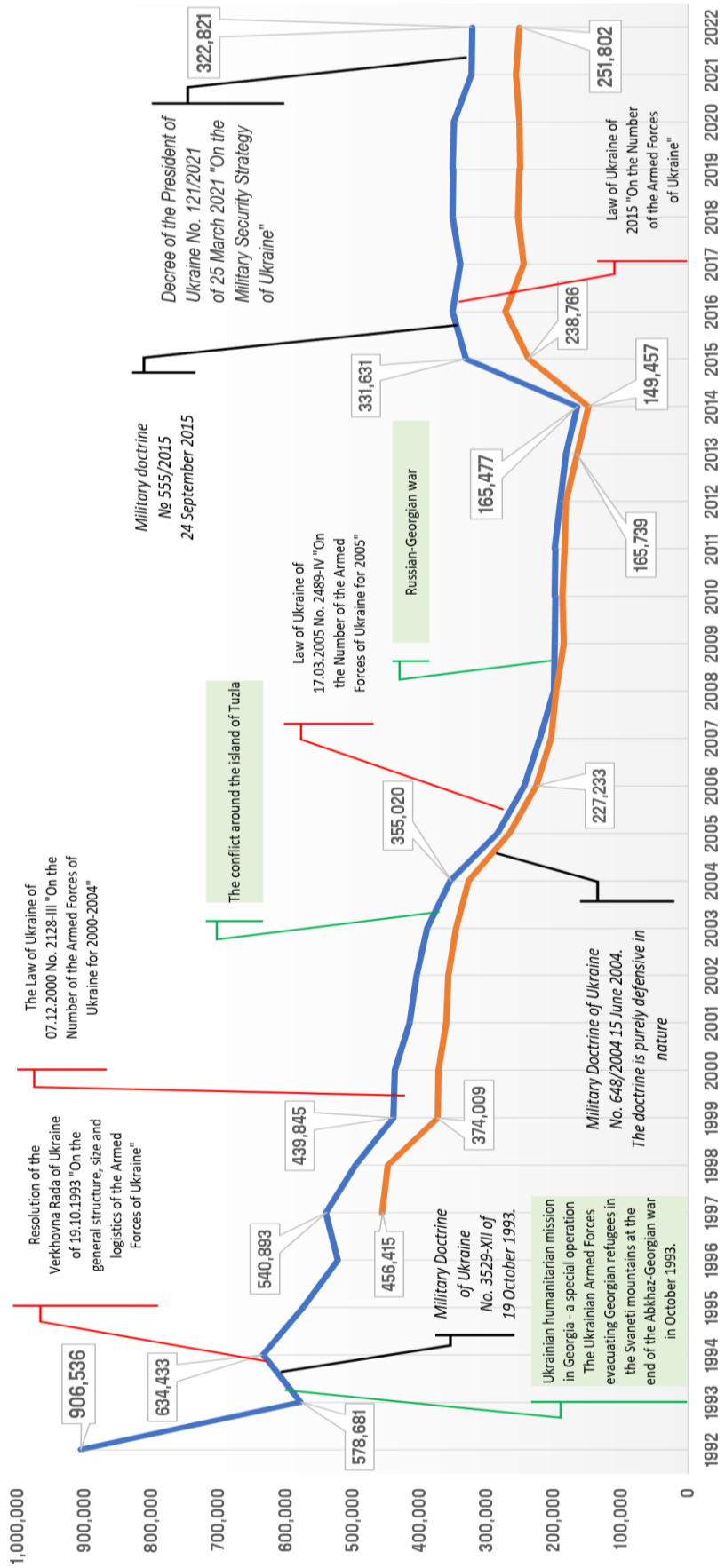


Figure 1. Changes in the number of the Armed Forces of Ukraine in 1991-2022

The results of the analysis indicate that the changes in the size of the Armed Forces of Ukraine are not well-grounded, especially regarding the significant reduction of the Land Forces' potential. Between 1993 and 2013, the Land Forces of the Armed Forces of Ukraine were reduced from 261,200 to 41,400 personnel, and the Air Force of the Armed Forces of Ukraine from 147,800 to 37,000. The Land Forces were reduced by almost 6.4 times, the Air Force by 3.5 times, and the Navy was unchanged. It should be noted that the Land Forces and Air Force of the Armed Forces of Ukraine were reduced proportionally during 1991-2003, with a rapid decline in 2005-2013 (after the adoption of the second edition of the Military Doctrine).

Between 2014 and 2022, the number of branches of the Armed Forces of Ukraine increased by 3.3 times, the Air Force by 1.3 times, and the Navy by 1.37 times. But this increase was not enough to liberate the temporarily occupied territories.

So:

if in 1991, the Armed Forces of Ukraine had such powerful units and formations as: 3 military districts (Prykarpattia, *Kyiv, Odesa*); 3 combined arms armies; 2 tank armies; 4 air armies; an air defence army; a missile army and army corps; and the Black Sea Fleet, in 2014 there are 2 operational commands, 1 army corps, and 3 air commands.

At the beginning of the large-scale invasion of the Russian Federation, we had 4 operational commands, one reserve corps, Air Assault Forces (AAF), Special Operations Forces (SOF), 4 air commands, and the Navy Forces.

The Law "On the Armed Forces of Ukraine" had 8 main versions until 2022. The first four stages provided for the reorganisation from the Armed Forces of Ukraine headed by the Ministry of Defence of Ukraine as the main command and control body to the separation of the General Staff of the Armed Forces of Ukraine as the main military command and control body, three permanent branches of the Armed Forces of Ukraine and structures that do not belong to the branches of the Armed Forces of Ukraine. The next four stages included the following measures:

The disappearance of such groups as associations in 2008;

the creation of the Joint Operational Headquarters (JOC), the separation of the Highly Mobile Airborne Troops of the Armed Forces of Ukraine, and the creation of the Special Operations Forces of the Armed Forces of Ukraine in 2016;

renaming the Highly Mobile Airborne Troops of the Armed Forces of Ukraine into the AAF (Air Assault Forces) in 2016;

creation of the Joint Forces Command of the Armed Forces of Ukraine (instead of the Joint Forces Operation), separation (creation) of separate branches of the Armed Forces - Territorial Defence Forces, Logistics Forces, Support Forces, Medical Forces, Communications and Cybersecurity Forces in 2021.

The latest changes were associated with the transition of the Armed Forces of Ukraine to a J(G)-structured staffing structure and command system with a redistribution of tasks and functions in accordance with the main standards of NATO interoperability.

At the same time, the structure of the branches of the Armed Forces of Ukraine, the number and capabilities of military command and control bodies, formations, units and military units changed heterogeneously. This was primarily due to changes in the number of armed forces at the legislative level and the transition to NATO standards and security guarantees signed during nuclear disarmament.

Therefore, according to the key periods of significant decline in capabilities, this process can be divided into five main stages (Figure 2):

6. 1991-1996 ("Formation");
7. 1997-2004 (the "Gradual Reorganisation");
8. 2004-2010 ("Professional Army and Transition to NATO Standards");
9. 2010-2014 ("Decline and vulnerability to threats");
10. 2014-2022 ("Recovery and Active Development").

1991-1996: Formation of the Armed Forces of Ukraine	1997-2004: Gradual reorganisation	2004-2010: Professional army and transition to NATO standards	2010-2014: Decline and vulnerability to threats	2014-2022: Recovery and active development
After Ukraine declared its independence in 1991, the country inherited a significant amount of Soviet military equipment and personnel. The backbone of the Armed Forces of Ukraine is made up of military units and formations that remained on the territory of Ukraine, including the Black Sea Fleet. The military districts (Kyiv and Odesa) were divided and management structures were created. **Structure:** Land Forces (motorised infantry, tank divisions, artillery). Air Force and Air Defence Forces. Navy Forces. Abandonment **of nuclear weapons**. **Reduction in the size of the** Armed Forces due to economic difficulties.	The first Military Doctrine of Ukraine was adopted in 1997. **Reducing the size of** the Armed Forces to 350,000 troops. Creation of the Joint Rapid Response Force (JRRF). The transition from the Soviet command structure to the brigade system began. Reducing the number of tank and mechanised units.	A course towards Euro-Atlantic integration and a gradual transition to contract service. Introduction of a brigade command structure (analogous to NATO). Creation of Special Operations Forces. Reducing the number of military units. **Further reduction in the number of employees** to 200,000. **Reduced funding, reduced combat capability, reduction of units**.	Priority is given to cooperation with Russia. **Curtailing the reform of** the Armed Forces. **Radical reduction in the number of employees** to 150,000. **The actual absence of combat-ready reserves, low level of troop supply**. **Elimination of many combat units**, including mechanised and tank brigades. **Complete degradation** of the Navy.	**Mobilisation** of reservists, creation of volunteer battalions. **Revival** of mechanised, tank and artillery units. **Return of up to 300,000 troops**. **Intensified rearmament**, deployment of new military units. **Establishment of the** Joint Operational Headquarters. **Implementation of** NATO standards. **Establishment** of the Operational Commands "East", "West", "South", "North". **Expansion of** special operations forces and development of airborne assault troops. **Development of** missile forces and artillery.

Figure 2. Main stages of changes in the structure of the Armed Forces of Ukraine in 1991-2022

The Central Research institute of the Armed Forces of Ukraine
Military Science. Vol. 3 No. 1 (2025)

At the same time, the first four stages were characterised by a sharp reduction in the number of the Armed Forces of Ukraine and the numbers of weapons and military equipment, which negatively affected the potential capabilities of the armed forces and led to their practical inability to resist aggression.

In particular, as noted above, at the first stage the Armed Forces of Ukraine included:

Military Districts - 3; Combined Arms Armies - 3; Tank Armies - 2; Air Armies - 4; Air Defence Army - 1; Missile Army - 1; Army Corps - 1; Black Sea Fleet; missile warning nodes - 2.

Already in 1992 the Air Defence Army was reorganised into three Air Defence Corps, and in 1994, the same fate befell the two Air Armies, with the simultaneous transfer of the Army Aviation to the Ukrainian Armed Forces.

The second stage involved the creation of three operational commands instead of military districts.

The third stage was characterised by the merger of the Air Force and the Air Defence Forces into a new type of service - the Air Forces - and the formation of air commands. In addition, the Northern Operational Command was reorganised into the Territorial Command "North" (two remaining commands were "West" and "South"), and the transition from a three-tier structure (division-regiment) to a two-tier structure (brigade) took place.

Thus, at the beginning of the fourth stage, the Armed Forces of Ukraine consisted of: operational commands - 2; territorial command - 1; mechanised brigades - 8; tank brigades - 2; airborne brigade - 1; airmobile brigade - 2; missile brigade - 1; artillery brigades - 3; separate combat regiments - 14; separate combat support regiments - 9; 169 combat centres and others.

The Air Force of the Armed Forces of Ukraine included:

tactical aviation brigades - 6; a separate tactical aviation squadron - 1, transport aviation brigades - 3, a training brigade - 1, a separate regiment of remotely piloted aircraft - 1, radio engineering brigades - 4, anti-aircraft missile brigades - 4, anti-aircraft missile regiments - 8.

The Navy of the Armed Forces of Ukraine included:

2 surface ship brigades, 1 naval aviation brigade and 1 coastal defence brigade.

The processes that took place in the main branch of the Armed Forces of Ukraine - the Land Forces - are particularly illustrative. After the transition from a divisional to a brigade system (with a significant reduction in capabilities), army corps were reduced (2000-2013), which further affected the Armed Forces of Ukraine and made it impossible for them to repel the aggressor.

The structures of the Air Forces of the Armed Forces of Ukraine, especially combat aircraft and air defence assets, have also undergone significant reductions.

In 2014, the capacity building of the Armed Forces of Ukraine began. By 2020, a number of organisational measures were taken, including the creation of four operational commands ("North", "South", "East" and "West)".

The Land Forces of the Armed Forces of Ukraine included:

operational commands - 4; mechanised brigades - 9; tank brigades - 2; motorised infantry brigades - 4; mountain assault brigades - 2, infantry ranger brigade - 1, missile brigade - 1; rocket and artillery brigade - 2; artillery brigades - 5; army aviation brigade - 4 and others.

The Air Force of the Armed Forces of Ukraine included:

Air Commands ("West", "Centre", "South", "East") - 4; Operations Command; tactical aviation brigades - 7; transport aviation brigades - 3; training brigade - 1; separate regiment of remotely piloted aircraft - 1; radio engineering brigades - 4; anti-aircraft missile brigades - 5; anti-aircraft missile regiments - 7.

The Navy of the Armed Forces of Ukraine included:

Naval bases - 3 (Western, Southern, Azov); Naval Command; Marine Corps.

In 2016, the airborne troops (since 2012, the Highly Mobile Airborne Troops) were subdivided into a separate branch of the Armed Forces of Ukraine, which was accompanied by an increase in their capabilities.

The Special Operations Forces of the Armed Forces of Ukraine were established in 2016, which increased the capabilities of the Armed Forces of Ukraine to create conditions for achieving strategic (operational) goal.

Thus, the reform of the Armed Forces of Ukraine, in particular the abandonment of the military district-army-division-regiment system, has led to a number of negative consequences:

a significant weakening of the operational and tactical level of command and control;

creation of a "critical mass" in terms of management (the number of subordinate units exceeded the capacity of management bodies to manage effectively);

a significant reduction in the capabilities of the "OK Brigade" system for operational building, building deeply entrenched defences, creating supply lines, etc;

reducing the ability of commands to reinforce subordinate formations (units, subdivisions).

The reduction in command and control led to a supercritical reduction in combatant command and control bodies, which was directly felt in 2022.

Since 1991, the Armed Forces of Ukraine have been functioning with stocks of weapons and military equipments, missiles and ammunition inherited after the collapse of the USSR.

The balance between the need of the Armed Forces of Ukraine for weapons and military equipments and their availability, considering the withdrawal from the armed forces, had a negative (downward) trend that began to improve only since 2015.

In total, between 1991 and 2014, the Armed Forces of Ukraine withdrew, sold and disposed of about 70,000 units of diverse types of weapons and military equipment.

In general, the number of weapons and military equipments in the Armed Forces of Ukraine decreased by 2.8 times (Fig. 3). The most significant reductions were armored infantry vehicles and armoured personnel carriers by 2 times, tanks by 5 times, tactical missiles and artillery by almost 6 times, helicopters and aircraft by 5-7 times, warships and boats by 12 times. The largest reduction was in the number of weapons of mass destruction - by more than 46 times.

Such a reduction in the number of weapons and military equipment, in particular its types, which have a decisive impact on the capabilities of the armed forces, has led to a sharp decrease (by 4 times) in their ability to defeat the ground enemy and air attack means (Fig. 4). A number of incidents at arsenals/ammunition storage bases and the lack of production capacity led to an acute shortage of missiles and shells during the large-scale aggression of the russian federation.

Major changes to the salary payments allowance occurred in 1999, 2001, 2003, 2007, 2008 and 2011. There were no further changes until 2014. Since 2012, the minimum salatywage has been equal to the subsistence level (Figure 5).

It is worth noting that the level of the main types of salaty for military personnel (battalion commander and platoon commander categories), which affect the level of pension provision, has been below the average salary since 2002, and in 2006 and 2007 even below the minimum salary and subsistence level.

Over the entire period from 1996 to 2014, given the general situation on the labour market, the salaries of military personnel were uncompetitive, especially in large cities.

It should be noted that the structure of the financial support of servicemen has been gradually changing - the share of the main types of financial support, which directly affects the amount of pension, has been steadily decreasing (from 100% in 1991 to 24% in 2007). In the period 2011-2014, this share was 46%, and in general, from 2002 to 2014, it did not rise above 64%), which also proved to be a demoralising factor for the officers of the Armed Forces of Ukraine (Figure 6).

Conclusion

In general, it can be stated that by 2014, there was a systematic reduction in the number and capabilities of the Armed Forces of Ukraine, a decrease in the attractiveness of military service,

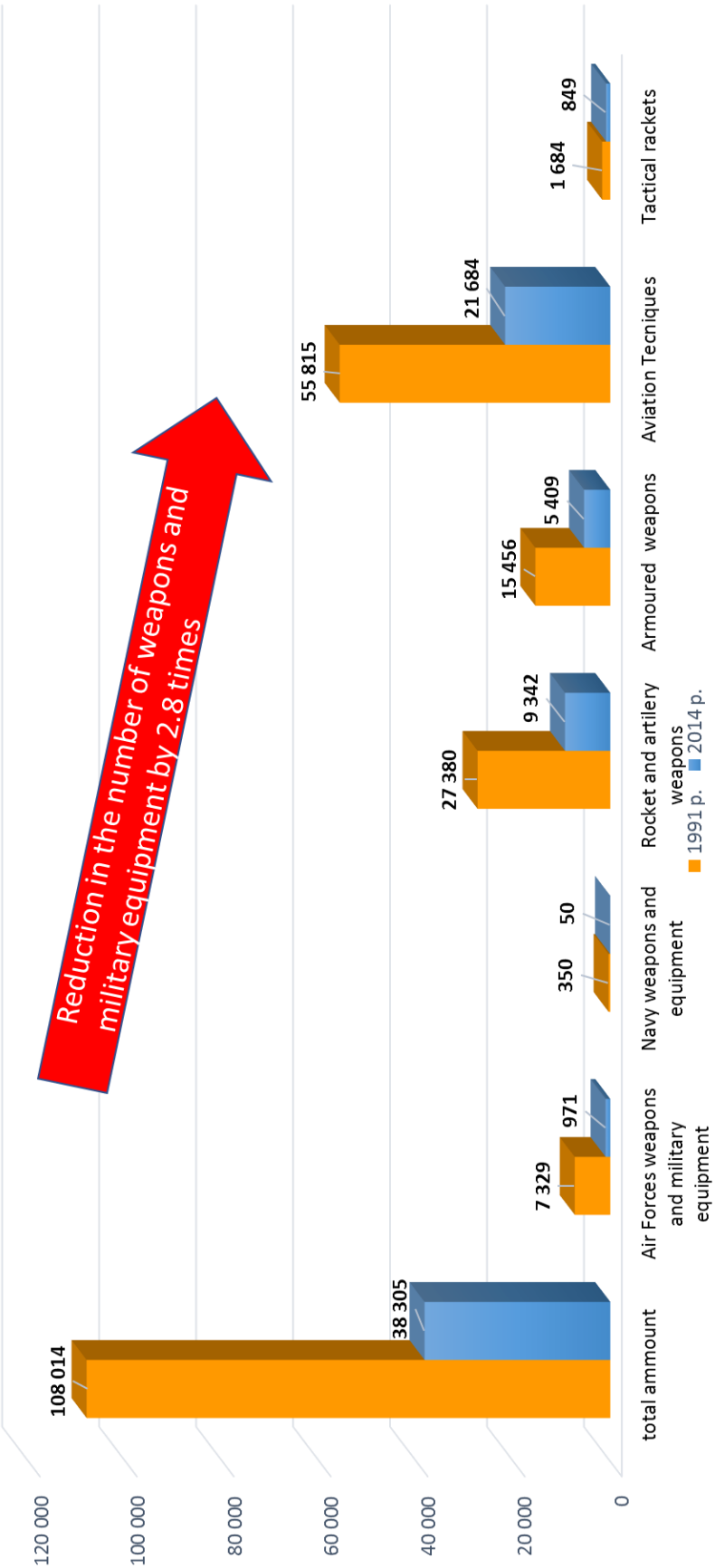


Figure 3. Number of weapons and military equipment in 1991-2014

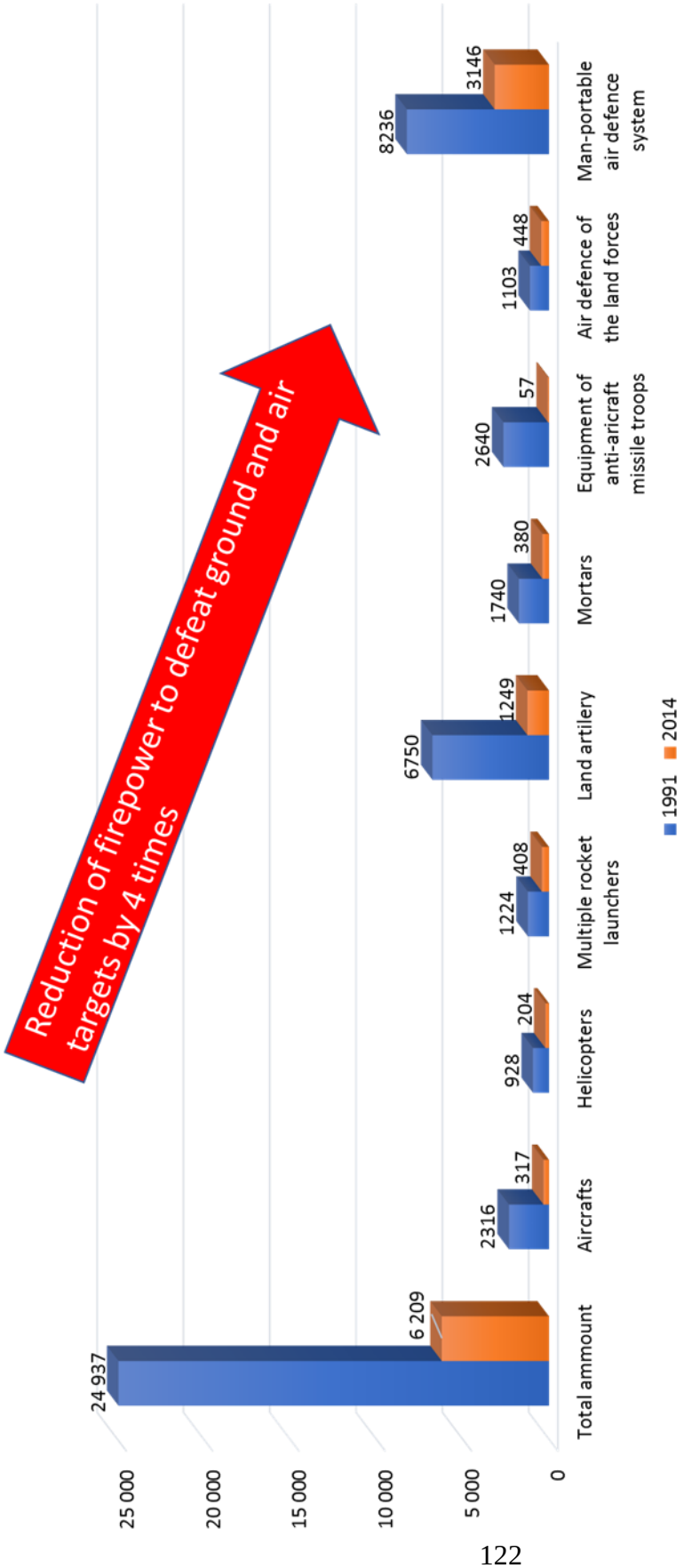


Figure 4. Number of major air and ground targets in 1991-2014

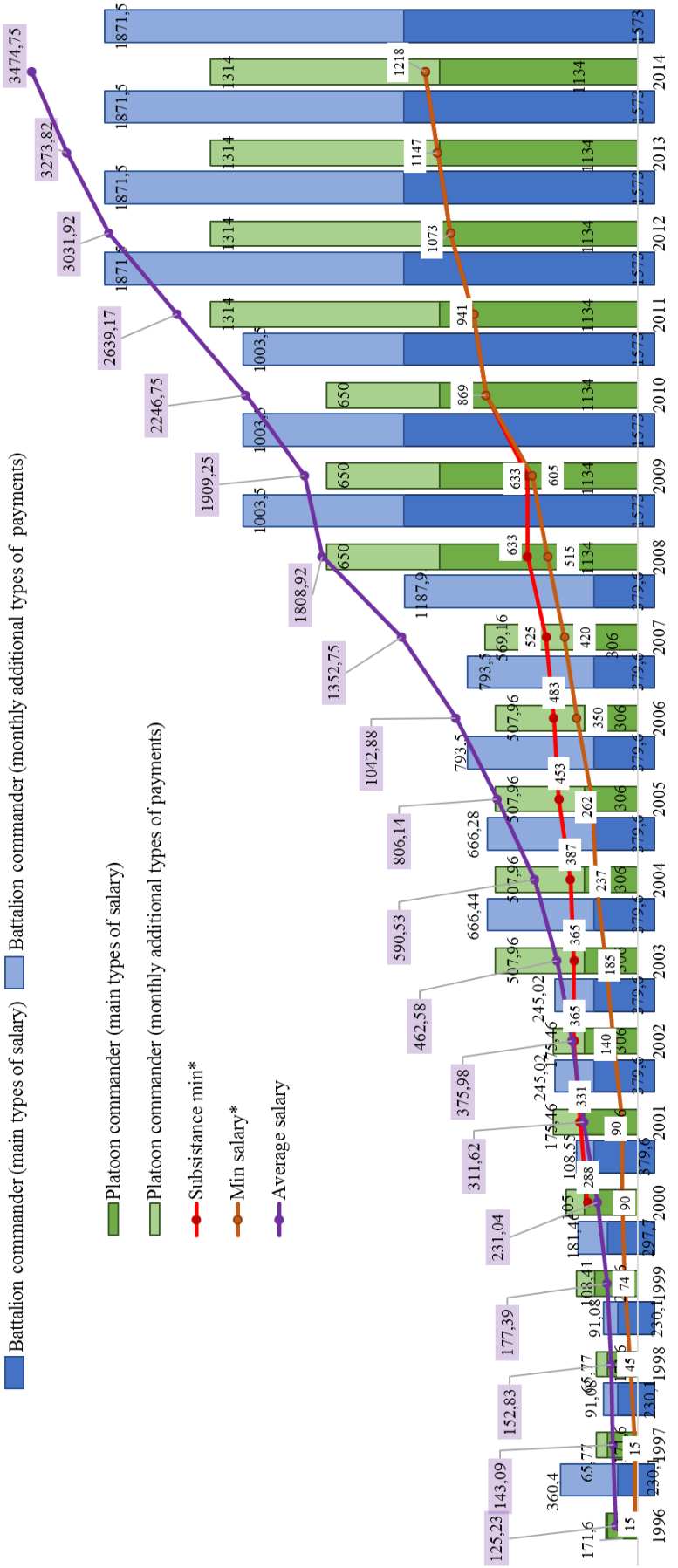


Figure 5. Dynamics of changes in the financial support of the servicemen of the Armed Forces in 1996-2014

Figure 6. The structure of financial support of the military personnel of the Armed Forces in 1996-2014

which led to the state's practical inability to resist aggression, an acute shortage of motivated personnel, major types of weapons (especially armoured vehicles, artillery, aircraft and air defence systems, ammunition.

The results of the research confirm that the development of the Armed Forces of Ukraine was uneven and depended on internal and external factors. In the first years of independence, the army experienced a reduction in numbers and technical capabilities, which reduced its combat capability. The period of 2010-2014 was critical due to insufficient funding and the lack of a strategic vision for the development of the Armed Forces of Ukraine. Russia's military aggression in 2014 forced Ukraine to launch an active reform of its army, including modernisation of weapons, transition to NATO standards, strengthening of combat training and improvement of military management. Despite the positive changes, challenges remain, including the need for further technical equipment, stable funding and human resource development. To ensure the effectiveness of the Armed Forces of Ukraine, it is important to continue to innovate, optimise military logistics, and strengthen international cooperation. The research can serve as a basis for further analysis of reforms and the development of a long-term strategy for strengthening Ukraine's defence capabilities.

Recommendations

The article will be useful for military experts, analysts, defence sector managers, security researchers, as well as decision-makers on further modernisation of the Armed Forces of Ukraine.

References

1. Sobol, E. Y., Kopotun, I. M., Kolomoyets, O. D., Kryvenko, O. V., Petkov, V. P., Anufriev, M. I., Dubenko, O. I., Hrytsai, T. H., & Sivka, V. V. (2022). *The Armed Forces of Ukraine. History, current state, main regulations, comments and explanations.* Professional Publishing House.
2. *History of the Armed Forces of Ukraine*. (2024). https://www.zsu.gov.ua/pro-nas/hto-my/istoriya-zsu-z-1991-roku/.
3. Seheda, S., & Shevchuk, V. (2024). Creation and Development of the Armed Forces of Ukraine: Historiographical Dimension. *Ukrainian Historical Journal*, *4*, 148-162. https://doi.org/10.15407/uhj2021.04.148.
4. Shevchuk, V. (2019). Historiography of the Creation and Development of the Armed Forces of Ukraine in 1991-2014. *Military History Bulletin*, *31* (1), 55-73. https://doi.org/10.33099/2707-1383-2019-31-1-55-73.
5. Bashynskyi, V., Kliat, Y., & Tristan, A. (2024). Development and application of the Armed Forces of Ukraine, armed struggle: theory, provision, experience. Testing and Certification, 3 (5), 14-19.
6. Semenenko, O., Tregubenko, S., Kharytonov, K., Semenenko, L., Musienko, V., & Tarasov, O. (2021). Analysis of the theory and practice of assessing the impact of the results of modernisation of weapons and military equipment on the combat capabilities of military formations. *Social Development and Security*, *11* (3), 116-129.
7. Snitsarenko, P. M., Tkachenko, V. A., Sokurenko, V. V., & Zubkov, V. P. (2019). Analysis of the experience of defence reviews in Ukraine and leading NATO member states to determine the prospects for the development of the Armed Forces of Ukraine. *Collection of scientific papers of the Centre for Military Strategic Studies of the National Defence University of Ukraine*, *3* (67), 46-53.
8. Sahaniuk, F., Pavlikovskyi, A., Shchypanskyi, P., Pavlenko, V. and others. (2019). *Defence review: Ukrainian dimension 2014-2018.* (Edited by Doctor of Military Sciences, Professor I. Rusnak). Ministry of Defence and the General Staff of the Armed Forces of Ukraine, NOU.
9. *U.S.Code TITLE 10, Subtitle A, PART I, CHAPTER 2, §118*. Quadrennial defence review. http://www.law.cornell.edu/uscode/10/sc_sec_10_0000011811110001.html.
10. *Review of force structures in implementation of partnership goal, preliminary report for consultations with NATO* (2011). Ministry of Defence.