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ECONOMIC COMPONENT OF FRENCH NUCLEAR STATUS

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Abstract

The article reveals the significance of the economic component of the French Republic's nuclear status notion in the context of ensuring its security and support of military power, and especially the financial support of this concept, as one of the most effective methods of guaranteeing security and independence in the modern world. The author emphasizes the fact that in present conditions, considering growing instability and international relations turbulence, the economic component tends to be a vital requirement for the development of state nuclear safety, on the example of France. Relying on the analysis of the economic component and the definition of the French nuclear power notion, it is possible to predict and assess the main trends in the development of the state security system and its defence strategy, as well as to formulate ideas about threats and national interests. It has been argued that the economic component of nuclear status is inextricably associated not only with the formation of a state security strategy but also with the development of the image and geopolitical component of security, aimed at providing the necessary conditions for the realization of French national interests.

Keywords: *nuclear status, state security, French Republic, economic component of security, security budget.*

Економічна складова ядерного статусу Франції

Анотація

У статті розкрито значення економічної складової поняття ядерного статусу Французької Республіки в контексті забезпечення її безпеки та підтримки військової могутності, особливо питанню фінансування цієї концепції, як одного з найефективніших методів гарантування безпеки і незалежності у сучасному світі. На прикладі Франції, доведено, що в умовах сучасності, враховуючи зростаючу нестабільність та турбулентність міжнародних відносин, економічний компонент стає життєво важливою вимогою розвитку ядерної безпеки держави. Спираючись на результати аналізу економічної складової та визначення поняття ядерних сил Франції, можна передбачити та оцінити основні тенденції розвитку системи безпеки держави та її оборонної стратегії, а також сформулювати уявлення про її загрози і національні інтереси. Автором зроблено висновок про те, що економічна складова ядерного статусу нерозривно пов'язана не тільки із формуванням стратегії державної безпеки, а й з розвитком іміджу та геополітичної складової поняття безпеки, спрямованої на забезпечення умов, необхідних для реалізації національних інтересів Франції.

Ключові слова: *ядерний статус, безпека держави, Французька Республіка, економічна складова безпеки, оборонний бюджет.*

Экономический компонент ядерного статуса Франции

Аннотация

В статье раскрывается значение экономической составляющей понятия ядерного статуса Франции, в контексте обеспечения безопасности и поддержания военной мощи, в особенности, вопросу финансирования этой концепции, как одного из наиболее эффективных методов обеспечения

безопасности и независимости в современном мире. На примере Франции доказано, что в современных условиях, учитывая растущую нестабильность и турбулентность международных отношений, экономическая составляющая становится жизненно важным требованием для развития ядерной безопасности государства. Опираясь на результаты анализа экономической составляющей и определение понятия французских ядерных сил, можно прогнозировать и оценивать основные тенденции в развитии системы безопасности государства и его оборонной стратегии, а также сформулировать представления об угрозах и национальных интересах. Автором выявлено, что экономическая составляющая ядерного статуса неразрывно связана не только с формированием стратегии государственной безопасности, но и с разработкой имиджа и геополитической составляющей безопасности, направленной на обеспечение условий, необходимых для реализации национальных интересов Франции.

Ключевые слова: *ядерный статус, безопасность государства, Французская Республика, экономический компонент безопасности, оборонный бюджет.*

INTRODUCTION

A well-formulated and scientifically grounded, open and transparent strategy for ensuring state security is an inalienable attribute of a civilized, contemporary international actor. Most developed countries have such a strategy and consistently implement it in practice. One of the most important aspects of France's Defence strategy is based on its nuclear status. It is impossible to complete the idea of ensuring the concept of 'nuclearity' without understanding its forming components, the basic elements. It should be noted that in today's globalized world, one of the key units of the creation of international relations was and remains economic relations, therefore, it is impossible to overestimate the importance of the economic aspect in the development of any element of the modern political system.

The world of the 21st century is the world of pervasive transformations, breakthroughs connected with the degeneration of traditional and modern structures. One of the tendencies forming the new global order is developing of the globalization process and the impact of it. Modern security environment also has a strong interconnection with the globalization. Both of these concepts are all-embracing. Therefore, there is no possibility to deny the influence of economic factor on the security system in any country.

Despite the fact that today the world is globalized and united more than ever before, we have to respect and estimate the idea of boundaries, sovereignty, and independence of a state, the right of a state to lead its own policy. So, the best guarantee of directing separate political line

it is wise using of one of the most effective and impressive tools, that is nuclear status.

To date, a policy of nuclear deterrence has been formally proclaimed as a defining feature of the security strategy of the French Republic. It is indisputable that the financing of defence programs is one of the pillars of their qualitative realization. Given the relatively recent change of power in France, we consider it necessary to focus on studying the defence budget and analyzing its key expenditure items, which will allow us to assess the prospects for effective implementation of the updated course of the Republic military strategy development. Unfortunately, today it is hard enough to calculate the actual cost of implementing a new defence budget and estimate the costs of supporting this decision implementation, due to the fact this information is usually served to the public in incomplete form to assure state security.

In a context of increasing military and geopolitical tensions between the world's great powers, it seems that the European ruling classes, led by France and Germany, are rapidly preparing for possible war [Sprenger 2018]. So far, European powers have aligned themselves under NATO auspices on the confrontation between the United States, Russia, and China. At the same time, the ruling class is demanding Europe to be ready to act independently from the USA and to be ready to protect its own interests.

The French Minister of the Armed Forces, Florence Parly declared that Europe should arm itself for wars of an unprecedented scale since the Second World War. European continent has

been in a sense of peace for many decades, but today more than ever before, this peace should not be taken for granted, because Europeans are facing now growing threats. President Emmanuel Macron in the late statement of 2018 called for the construction of a 'real European army' [Kunz 2017]. Macron's stated goal was that Europeans could and should 'protect themselves against China, Russia, and even the United States' in a contemporary world order condition [Kristensen 2019].

Since 1945, humanity has entered a new era, that of having the capacity to destroy its environment in a sustainable way. The belief that peace was achieved through the military atom has been uncrowned. It is argued that it cannot be called into question since the nuclear weapon is the phenomenon that will ensure the guarantee of peace. Similarly, it would be impossible to 'dis-invent' a nuclear weapon and to refuse nuclear weapon possession. Such ideas have been erected in totem and today it is of first importance to wisely understand the necessity of nuclear deterrence, particularly for France, according to the information appeared in official state documents.

1. Literature review

Ensuring state safety is key to effective implementation of the national security strategy and the realization of the national interests of the state on the international arena. The status of a nuclear state remains to be a guarantee of a successful security strategy implementation, as well as carrying out an independent political line on the international scene for France.

The choice of this topic is conditioned by the fact that today nuclear status issue does not lose its significance and importance, on the contrary – it is getting to be more influential. With the development of globalization and integration processes for the countries, the technological progress as well as the increase of possible threats and aggravation of relations between influential states, it is impossible to overestimate the weight of nuclear status in France, as one of the leading countries of the European Union.

Over the twentieth century, scientists have repeatedly dedicated their researches to this issue, however, the last ten years have been marked

by the lack of significant attention to the question of nuclear status importance, which, according to the author's opinion, is unfair, because the modern political life is changing so quickly that the need for rethinking certain concepts appears more and more often. Since the events of recent years point to the persistent interest of French political figures in the issue of nuclear status, one should pay close attention to it, especially, given the significant role of the state in the Euro-Atlantic security region.

Well-known researchers and scientist all over the world paid meaningful attention to the role of nuclear status as such in political processes and in the international dialogue. Equally, nuclear deterrence was clearly studied by international experts. However, the issue of the economic component of the nuclear status of France has not been previously caused much interest from academics, which is why, we believe, it is important to combine these subjects and to investigate the consequences and the connection between the costs of nuclear status and the position of France in the international arena.

Origins and history of the French atomic program were studied by W.L.Kohl, G.Hecht who wrote a work on nuclear power and national identity, its connection and impact. Regional powers and international conflicts regarding nuclear strategy were examined by V.Narang. H.M. Kristensen [Kristensen 2019] and M.Korda conducted research reviewing the status of France's nuclear arsenal, that is of first attention for the majority of both Ukrainian and International academics. The question of how nuclear force had been conceived and developed was investigated by scientists like D.David and O.Baisnee. Future of France's nuclear weapon is also disputable through the specialists, such as B. Tertrais and P.Quilès, N.Alexis [Alexis 2018], J-M Jacques [Jacques 2018].

In Ukraine French nuclear policy is often studied in a context of a Foreign policy tool by researches like V.V. Avramenko, N.V. Malynovska, O. Kolomiets, A.Shapochkina, nevertheless, this is not the focus of domestic interest of scientists.

It should be emphasized that to profound

studying of the maintaining nuclear status costs and nuclear power itself, the following resources remain to be the most important: Military Law Programming (and its projects, published every five years), Strategic review on Defence Strategy and the White book on defence [Lagneau L. (2018)].

Despite the considerable groundwork of academics and ‘field’ experts, there is an unbiased need for a deep study of the influence of economic factor on the nuclear status of France and its correlation. This foregrounds the need to examine and develop this objectively important idea. The purpose of the following study is to understand the dependence between budget expenditures and nuclear strategy of France.

2. Research methodology

In this paper, the following methods were used: comparison, specification, systematiza-

tion, generalization. Methodological basis of the work is the principle of comprehensiveness, completeness, objectivity. To avoid unilaterally, superficially reasoned assessments the following research methods were used: analytical, comparative, observational method, statistical and data collection technique.

2.1. Data collection technique

This method gave us an opportunity to compare and analyze key figures on nuclear expenditures in France, so it is possible to partially predict the development of security strategy, outline the main interest of the official political program. By the way, such analysis makes it real to distinguish the course declared by the government from real interests, due to the understanding of enormous expenses on nuclear weapons. For example, table 1.

Table 1. Evolution of French nuclear forces

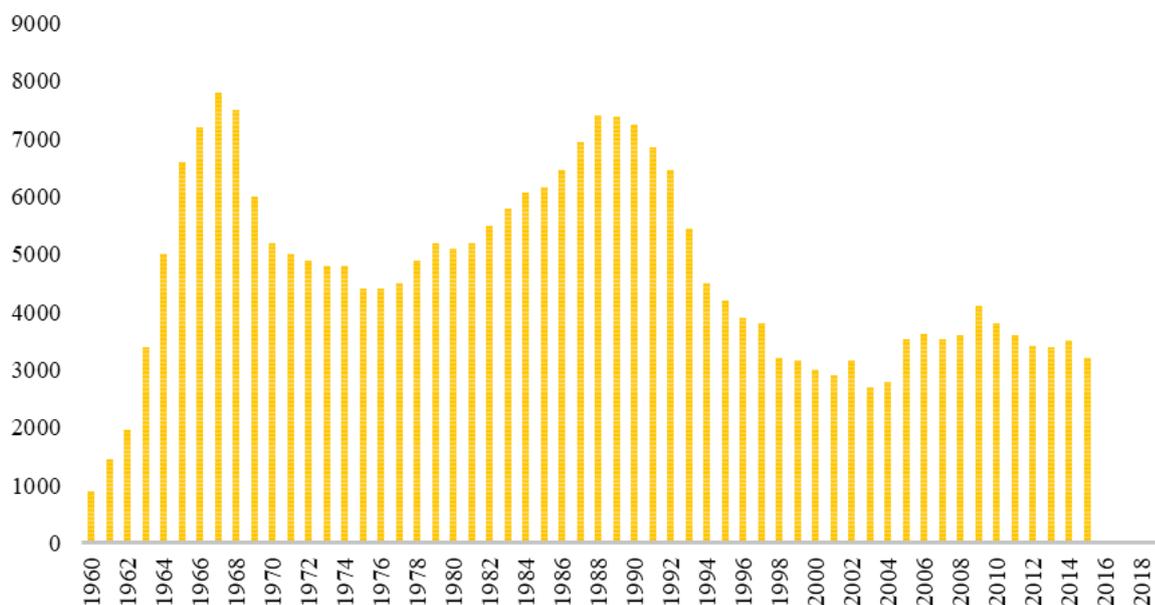
	1966	1976	1986	1991*	1996	2006	2016	2019
Number of warheads	36	212	355	540	450	350	290	300
World arsenal	38700	48025	69 368	55 260	37 181	24 892	15 405	14 955
French part in a world arsenal	0,1%	0,4%	0,5%	1,0%	1,2%	1,4%	1,9%	2%
	* a peak year for nuclear weapon extension							

Regarding the collected data, it is possible to make an assumption that France trying to maintain its strong position in the world division of forces. Despite the fact, a total number of warheads decreased from a peak in 1991, France’s

part in a world arsenal, on a background of a general decrease in nuclear forces, is constantly growing. This table confirms the opinion expressed by the country’s leaders on the support of the nuclear deterrence strategy.

Table 2. Evolution of nuclear credits since 1960

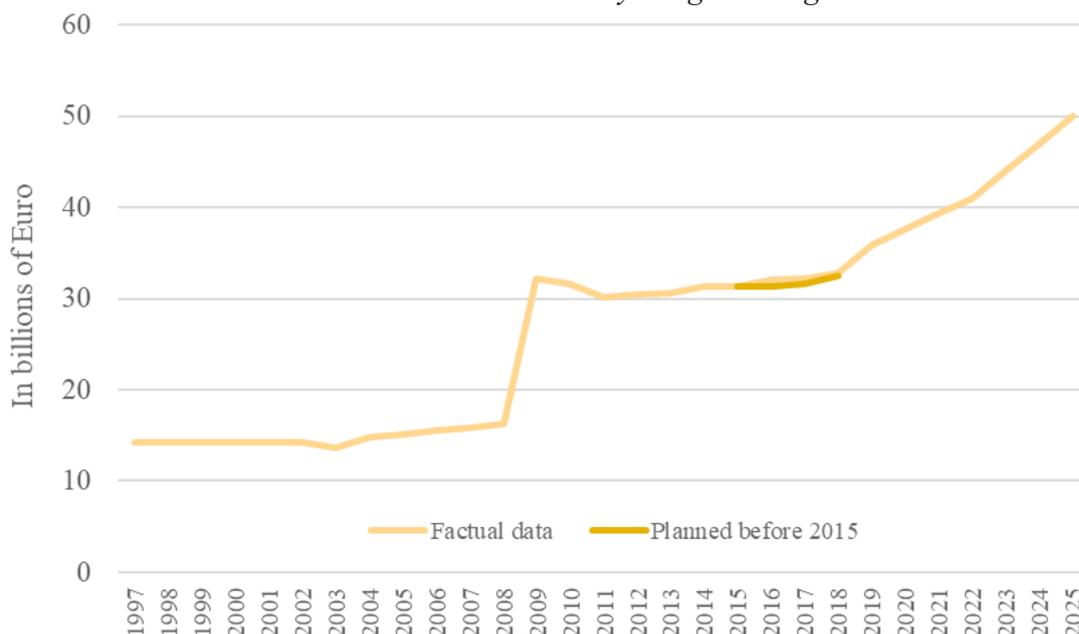
■ Nuclear credits in millions of Euro



The second table, that has been also created on the information from Military Planning Law texts, also verified an idea of strong support deterrence strategy. However, given information uncover the changes in priorities of budgeting. The greatest jumps in funding over the past ten years coincide with the years of Nicolas Sarkozy's rule, 2007-2012. One of the main characteristics of his rule was the recognition of instability in the

region and the desire to strengthen the position of the EU. Regarding nuclear weapons, the president clearly emphasized the need to preserve the two nuclear components. The doctrine issued during his presidency corresponded to the spirit of the policy of Jacques Chirac, that is also displayed in the general picture of financing the nuclear aspect during the relevant periods 1995-2007 compared to 2007-2012.

Table 3. Capital expenditure of the French Defence since 1997 to nowadays, based on Military Programming Acts



The following table gives us main information on strict planned for the near future, weighted spending on French Defence. These facts convince us that the country is on standby for something. A gradual increase in spending does not mean France fight for leadership in the region but shows its strong commitment to the place occupied. One of the interesting moments on this table is an existence of the 'second line', planned before 2015. This line proves the flexibility of a Defence budget that makes it possible to quickly react to some extraordinary events. Moreover, the costs on the defence budget increased rapidly as an answer to Paris events in 2015.

Thus, practicing various methodological tools, using works of different theorists and supporters of sometimes opposite ideas, this all is aimed at profound understanding of the subject and the discovery of not always obvious links between the various elements of the system, that creates an absolutely new vision of any notion.

3. Empirical research results

The complexity of calculating nuclear deterrence costs in France is explained by experts: it is far from always possible to clearly identify the share of conventional and nuclear use of certain apparatus. For example, the cost of exploiting the carrier "Charles de Gaulle" or the "Rafal" fighter cannot be calculated clearly because its value depending on the purpose of the use. Under the same logic, the investment costs for the development of nuclear weapons are not considered nuclear expenditures but actually fall into another category of costs. In terms of calculating, the cost of nuclear power is the component of "nuclear waste management" [Barthe 2006], which in fact is not an integral part of either the defence or the nuclear budget. Taking into account the urgency of the issue of sustainable development in the modern world, the value of this aspect of 'possessing nuclear power' should be emphasized. By the way, it should be noted that the total budget for disposal and management of radioactive waste, in general, is 250 million euros per year.

Nevertheless, according to rough estimates of French experts, the nuclear component of the Defence strategy costs from three to four billion euros annually. It should be noted that the prime

minister of France, 1988-1991, Michel Rocard, who spoke in favor of saving money on this item of expenditure, stressed on the amount of 16 billion euro for five years.

However, the assessment of the cost of these expenses seems to be a really challenging task. For the French Republic, the essence of the problem lies in the fact society was actually divided into two camps: supporters and opponents of the nuclear deterrence strategy, which foresees the non-use of nuclear power of the state against another state that also owns it. Such a state of affairs is supported by the constant fear of "reciprocity". The unifying force, for both supporters and opponents of nuclear power possession, is the desire to have a piece of information about the reality of existing and future costs of deterrence.

Most of the experts involved in the study of such research underline the fact that, since 1996, which been marked with the end of nuclear testing, nuclear deterrence costs France about four billion euro per year. This figure is equal to 10% of the Republic Defence budget, as opposed to 30%, as it was in the 1960s-1970s of the 20th century, years of active development of the nuclear strategy [Colson 1977]. Such a change in the funding priorities shows, respectively, the change in the vector of political thought. However, the need for possession of nuclear weapons remains the undisputed truth for the majority of the population of the state.

From the point of view of financing, the most interesting aspect of the economic component of France's nuclear status is the fact that, even in the event of a decision to abandon it completely, the costs of realizing this goal will remain equivalent to the current costs of maintaining it for a long time in the future too.

The restoration of the nuclear arsenal, as foreseen by the Military Planning Law 2018, demonstrates the commitment of Emmanuel Macron to a doctrine that had not previously been discussed in the general debate. "For over fifty years, nuclear deterrence has been a key element of our Defence strategy," the French president said in early 2018. Despite a large number of discussions on this topic, the issue has now been resolved: as Macron promised in his election campaign, much

attention will be paid to the restoration of two components of nuclear deterrence: submarines and their weapons, as well as nuclear warheads on board of strategic air force. All of this is envisaged by the 2018 Military Planning Act, which came into force in 2019.

Despite the president's decision, the idea of deterrence, as the idea of restoring the two components of deterrence, is far from being unanimous. A consensus on the issue of containment was achieved at the end of the 1970s when the prospect of retaining power belonged to the "left". Since then, there has been no debate on this topic, except for the brief 1995 restoration of nuclear tests and nothing else [Maldera 2016]. Each year the press covers issues of deterrence, a series of conferences on this topic is held, which cannot be said about the debate. After all, this issue does not represent a significant interest for the public and the political elite except those for whom this question is fundamental.

Since France is preparing to significantly increase its nuclear deterrent budget and initiate a recovery cycle that will end in 2080, even the question of the possibility of the debate has already divided society by supporters and opponents of an atomic weapon and nuclear power. It is believed that after the winning Nobel Peace Prize by the International Nuclear Weapons Campaign, it is more than ever important to maintain or, conversely, stop the deterrence. It is moreover important while the trends in the rearmament and proliferation of nuclear weapons are topical issues worldwide.

3.1. Arguments for nuclear deterrence

Emphasizing the need for a comprehensive understanding of nuclear deterrence issue in France it is proposed to consider the pros and cons of such a disturbing question. Beginning with arguments for nuclear deterrence, first of all, it is necessary to pay attention to the idea of strengthening the status of the state in the international arena. Nuclear status is considered to be an ultimate guarantee of the leading state position in the world. From the first weeks of his mandate, E. Macron has confirmed his commitment to nuclear weapons, by visiting a nuclear submarine based on the Ille-Longue peninsula in Finistère,

as well as Istres, where strategic air forces are centered. The confirmation of this position was also "mini White Book", which stated in its introduction following: "Long-term support for deterrence [...] remains to be necessary more than ever before."

Regarding investment in nuclear deterrence, the following could be stated: nuclear deterrence in France had never before been so legitimated as with the rule of E. Macron [Morrow 2019]. After all, there were objective conditions for this purpose. The present could be identified with a situation similar to the Cold War times. However, the difference lies in the intention of France to be less dependent on the United States, especially in terms of security. This situation is also influenced by the Russian strategic problem. The world is defending again, and hence, for France, nuclear deterrence becomes even more important. The end of the Cold War did not bring the world the dream of stability, it made the world even more unpredictable and unstable. This vision is evidenced by the priorities outlined in the Strategic Review of Defence and National Security.

"The restoration of Russian power is becoming the greatest threat after the terrorist threat, according to the survey of 2017. Nuclear deterrence remains the main guarantee of France's position in the world", – said François Geleznikoff, director of the Military Department of the French Atomic Energy Commission.

Even if deterrence is not enough to obtain everything, it helps avoid the worst. However, it is true only when the credibility of its political, technical and potential capabilities is guaranteed. The first component maintained by the affirmation of the doctrine by the supreme authority. All French presidents gave the speeches devoted to this issue. The next two components are based on continuous modernization, and, at the same time, investments, envisaged by the Law on Military Planning. As the President of the Republic emphasized: "... it is necessary to upgrade the 'oceanic force' component, thanks to a permanent presence in the sea, protecting against any strategic surprise." What is also important is the equivalent update of the 'air' component, which due to its demonstration possibility is a part of

the restraining, preventive dialogue. Hollande described them as ‘visible and non-visible’ security components. They may have several purposes, such as the ‘first use’ of a nuclear weapon in response to a non-nuclear attack. To provide trust to technical and potential aspects, the executive power is willing to spend about five billion euros from 2020, comparing to 3,6 billion euros today (exact amounts are secret information), to reach the index of six billion of euros per year by 2025.

It is impossible not to pay attention to the complementarity. Of course, in the conditions of a limited budget, it seems logical to examine the possibility of recovery of the above-mentioned components. Due to the fact that the choice has already been made, the concept of sustainable development that is urgent now requires considerably lower costs. Future nuclear submarines and their ballistic missiles will only be the evolution of existing models. In terms of profitability, the aspect of ‘air’ appeals extremely interesting, as it applies to all type of aviation. Thus, taking into account the need for a high level of preparation for both the material base and the personnel, resulting in high accuracy and effectiveness of the combat tasks, the technical and operational indicators of the strategic forces are interweaving and also affect the ordinary forces.

Air Force’s nuclear missiles require more technical improvement. This task can be solved through two implementation options: ensuring their invisibility for radar or working on the hyper-speed of missiles and aircraft, which would prevent interceptors [Irish 2018]. However, this technology is extremely complex and requires a level of its development, which has not been achieved yet.

On February 2019, the Trump Administration said it was suspending compliance with the 1987 Intermediate-range Nuclear Forces Treaty with Russia. Later, the French army organized a general repetition of a nuclear strike (everything except the detonation of a real nuclear warhead).

By minimizing the appearance of the connection between the simulation and the collapse of the US-Russia nuclear treaty, the French government stated France prepares such operations ‘well in advance’ and conducts them ‘regular-

ly’. Whether this is true or not, the decision to announce the exercise was a deliberate sign to make it clear that the French state is preparing for nuclear war.

France has about 300 nuclear warheads, making it the third largest nuclear power in the world, behind the United States and Russia, each of which has about 6,500 and 6,800. The French government has not tested a nuclear weapon since 1996 when a nuclear test in the Pacific under the leadership of Jacques Chirac caused an uproar in the population.

Under the current conditions, the strategy of nuclear deterrence does not seem to be a disputable or discussible question, but as a vital concept. The increasing instability in the European continent and in France, in particular, the unreliability of International actors in their promises, contribute to the prosperity of the idea of nuclear deterrence, as an instrument of providing and guaranteeing at least a shaky security looks like a strong argument ‘for’.

3.2. Arguments against nuclear deterrence

For completeness of understanding, it has to be considered the arguments against nuclear deterrence. In the context of these arguments, it is believed atomic weapons can be misused, accidentally or as a result of an accident. This statement actually unites both supporters and opponents of the deterrence policy in France. In their opinion, the “non-usage”, but only the fact of the presence and possessions of a nuclear weapon is sufficient to prevent any conflicts.

According to Nicolas Roche, Director of Strategic, Security & Disarmament Affairs of the French Ministry of Foreign Affairs: “Nuclear weapons are used daily: examples are strategic air forces being in a state of alert or constantly patrolling submarines”.

Paul Quilès, one of the most active advocates of nuclear disarmament, who held different minister offices while ‘left-wing governments’, including being the Minister of Defence calls an argument about false, accidental or accidental use of nuclear weapons ridiculous. In support of this view he gives an example of episodes when “the catastrophe was close enough”: the accidental collision of French and British submarines in

2009 [Bouin 2009]; the decision of the Soviet colonel Stanislav Petrov to neglect the warning to necessary using of nuclear weapon in 1983 (which turned out to be a 'Happy mistake'), as well as the explosion of an American bomber, with atomic missiles in 1966 in Palomares, Spain [Quilès 2018].

The idea of nuclear deterrence ignores 250 000 deaths from Hiroshima and Nagasaki bombs, where a nuclear weapon was used. The proliferation of nuclear mini-armament, especially in the United States and Russia cause additional anxiety. This particular weapon intended for use in specific cases, its existence suggests nuclear power can become a 'field gun' again.

It must be admitted that the world arsenal no longer has such morphology as during the Cold War. The global number of nuclear weapons from the 70,000 (in the late 1980s) has reached 17,000 units today. However, such a reduction occurred due to cost and spending, as well as the need for use, that is, for the sake of reasonable management. Despite the quantitative reduction in weapons, the real process of disarmament has not advanced much over these years [Barluet 2017]. Surely, France agreed to carefully reconsider its arsenal after the collapse of the USSR: the stock has been reduced by half to about 300 units today, and the ground component had to be abandoned.

According to the opponents, the usage of nuclear weapons and the atom at all is a political weapon, which reduces the rating and position of the modern state on the world stage, since on Germany's example it is possible to can gain recognition of its views without the use of such methods as a nuclear weapon.

Although the Cold War had ended and nuclear arsenals had fallen significantly since the mid-1980s, spending on nuclear budgets had steadily increased. Such spending of the state budget is a reality of all nuclear-weapon states. According to expert estimates, during the decade from 2010 to 2020, the total costs of all states expenses on nuclear maintenance will be approximately one thousand billion dollars. Therefore, reality shows that despite the decrease in quantitative indicators, the state had actually started a new stage in the race to improve nuclear arsenals.

Moreover, in 2014, the then Prime minister of France, Manuel Waltz, did not hide the opening of the main nuclear weapon simulating system, which clearly showed that France is competing for supremacy in deterrence technology.

France on this issue is a very prominent state. In July 2017, the National Assembly adopted a Military Programming Law for the period 2019-2025, according to which the costs of nuclear forces amounted to 37 billion euros [Simpere 2018]. This law proclaims the development of a new generation of nuclear weapon systems that will be used until 2080. It should be noted that the budget of this law increases by 60% compared to the previous Law (2014-2019), which then amounted to 23,3 billion euros. Such a rise in budget conditioned to modernization (maintenance of equipment) and upgrade (production of new systems and armaments) of equipment [Blenckner 2018]. In a long-term perspective, spending exceeds six billion euros annually (for comparison, the budget of justice is only one billion more). And over time, these costs will be only increasing, because the upgrade process is scheduled for a period of twenty years.

Under the new Military Programming Law, spending on atomic weapons will almost double between 2019 and 2025. The publication of the Military Planning Review is a clear illustration of the desire to hide the real deterrent budget and avoid any discussion of this issue. In the text of the law, there is no exact amount of defence expenses. In order to show the transparency of the authorities, a discussion is scheduled for 2023 on budget cuts: up to 25 billion euros in the period 2019-2023 and up to 12 billion euros by 2025. Thus, the overall reductions remain unchanged at 37 billion euros, namely, the planned budget cuts are a method of political communication. Paul Quilès, who initiated a nationwide debate on a nuclear weapon in May 2019, which was rejected by the opponents, also proves an idea that almost half a century after General de Gaulle's death, and despite the end of the Cold War, the debate on nuclear disarmament remains a taboo subject in France.

According to the latest Strategic Review, deterrence suffers from new threats, namely, cy-

ber threats may pose a risk of deterrence, both technical and doctrinal. Command, control and information systems used in the context of containment may be vulnerable to large-scale cyber-attacks. Their goal is to make nuclear order ineffective.

Well-known “nuclear illusion” is an idea that atomic weapons would be an ultimate guarantee of security by deterrence. It is strongly believed that the purpose of the nuclear weapon is to impress the opponent, without using the bomb, to appeal to the reason of an enemy. Today, the real danger for security and a nuclear weapon is the cyber threat. If imaginary hacker hijacks a communication system of a submarine, or carrier; turns off nuclear power plants (France is the most dependent on nuclear energy state in Europe); finally, “presses the Red Button” there will be no time to review security strategy [Findlay 2011]. Thus, the most important argument for the opponents of nuclear deterrence remains to provide security through non-use of such a dangerous weapon.

The opacity of the defence budget indirectly confirms the judgments on increasing the costs of the nuclear weapon program in France. According to a public report of the Accounting Chamber in 2010, “very often, the cost of nuclear programs that have not yet been officially launched, but whose financing is foreseen by the law on Military Programming, is significantly lowered.” This situation allows constantly increasing the spends on the realisation of planned programs. So, the Simulation of Nuclear Testing Program, which is still not fully operational, has grown by 257% over 20 years, according to experts’ estimations.

CONCLUSION

Despite the fact that the leaders of some nuclear states expressed their vision of a world without nuclear weapons and would, in fact, have to become guarantors of the completion of the disarmament process, they could not elaborate a detailed plan for the elimination of their arsenals and, conversely, continued modernizing them. An example of this was the situation in France.

According to Emanuel Macron’s decision, France in the next decade must rebuild two components of its nuclear arsenal of containment: sea

and air. The key components of the nuclear safety program will be the modernization and restoration of nuclear submarines, the development of a new generation of rocket carriers, released in the Military Program Law for the current period (2019-2025). In the coming decades, deterrence remains to be the key to the French Defence strategy, as soon as this issue is vital for governmental executives and far even from public debate.

Along with a certain strategy, the main issue of an economic nature is to the assessment of the cost for providing the Defence strategy. According to preliminary estimates, the cost of this program will be 25 billion euro for the period 2019-2023, then six billion per year by 2025, and six billion later. In general, the law provides for a military program of 37 billion, which is 60% more than the last law on military programming, thus it is possible to conclude irreversibility of a course to the development of a nuclear component of France’s security strategy.

Such investments will absorb the attention of the French in the next decade. To substantiate such a decision in the society, the “Information Report on Industrial and Technological Challenges for the Recovery of Two Constituent Constraints” was published. The aim of the report was an attempt to provide answers to the compatibility issue of these new investments with the Treaty on the Non-Proliferation of Nuclear Weapons, which France joined in 1992; show the ratio of investments to conventional armed forces; to publicize the cost of uranium mining, which in turn would be an important argument in support of increasing the budget for nuclear deterrence.

Today, the idea to maintain a nuclear deterrence as a guideline for France has been proved by its comprehensive support from officials, their statements, state documents and what is more important it has been also demonstrated in practice – by cost increase for this. Unfortunately, new tendencies of a modern world made security threatens worse: the newest armament, developing a weapon, increasing number of threats and their types, such conditions complicate safety control and motivate statesmen to find more effective and sophisticated ways to promote and guarantee security in a modern interwoven environment.

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