

THE COMPARATIVE ANALYSIS OF THE DEFENCE SYSTEM COSTS OF THE REPUBLIC OF SERBIA AND THE NATO MEMBER STATES

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Достављен: 13. 03. 2023.

Језик рада: Енглески

Кориговано: 14. 06 и 18. 08. 2023.

Тип рада: Прегледни рад

Прихваћен: 31. 08. 2023.

DOI број: 10.5937/vojdelo2303013M

By analysing the current state of the budget funds that are allocated for financing the defence system of the Republic of Serbia, on the one hand, the paper presents theoretical knowledge about budget process, and, on the other hand, the comparative analysis of the costs of the defence system of our country and the defence costs of neighbouring countries and some NATO member states has been conducted. Due to the specificity of the defence financing through budget allocations, and thus strict financial discipline and control, the objective of the paper is to consider the possibility of more efficient use of public expenditure funds, both through the perspective of planning and executing budget in the defence system. Furthermore, the problems in budget execution, the necessity of good planning and adequate distribution of budget funds, as well as the importance of having a favourable structure of the defence expenditure has been emphasized, in order to improve the current situation in the Ministry of Defence and the Serbian Armed Forces. The conclusions of the conducted research indicate that a long-term success in the accomplishment of goals in terms of expenditure management and effective resolution of open items can only be achieved by defining and implementing an appropriate financial strategy.

Key words: *budget, budget system, financing, expenditures, costs*

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Introduction

The system of financing the defence costs is studied throughout the history of human society and includes the research of the defence problems in various economic fields. In general, defence is treated as a public good of national economy, but it also has to be borne in mind that defence economy analyses the interdependence between defence and national economy in different aspects.

After the Cold War, the reduction of the defence expenditure was considered the so-called "peace dividend", and the allocation of funds to finance the defence costs was considered a burden on the economy. However, nowadays the world is increasingly facing unconventional conflicts, such as terrorist attacks, which require consideration of the defence system from a new point of view and a change in security measures. After the era of peace bonus, global military expenditures have sharply escalated despite some decline in military personnel worldwide.

The need to reach the highest level of readiness and capability of the defence system for its engagement is conditioned by the decisions of the state leadership expressed through national interests. The achievement of this goal is conditioned by limitations of a financial character. The financing of the defence system of the Republic of Serbia, as a direct beneficiary of budget funds, is primarily regulated by the Law on the Budget System of the Republic of Serbia, because it is defined by the Law on the Budget of the Republic of Serbia for a given year.

This paper has two objectives. The main objective of the research is to conduct the comparative analysis of the costs of the defence system of the Republic of Serbia, its neighbouring countries and some NATO member states in order to consider the possibilities for a more efficient and effective use of the public expenditure allocated for the defence system, while a special objective is to define the problem of the distribution of budget funds and emphasize the structuring of more favourable distribution of the defence expenditures in order to improve the current situation in the Ministry of Defence and the Serbian Armed Forces.

In the first part of the paper, budget process and its phases are described in detail, in the second part the focus is on the sources of financing the defence system and the classification of the defence expenditures according to the types of costs, while in the third part the comparative analysis of the costs of the defence system of the Republic of Serbia and the defence costs of neighbouring countries and some NATO member states in 2021 has been conducted. In the conclusion of the paper, the current trend in the structure of the defence expenditures has been studied and recommendations for its improvement have been offered.

Budget process in the phase of allocation of financial resources to the defence system

The budget system in the Republic of Serbia is regulated by the Law on the Budget System, and it is elaborated in more detail by a series of by-laws, which define the classification of income, salaries, expenditures and costs, budget accounting, etc. In

this way, the integrity of the budget system of the Republic of Serbia is provided by a common legal basis (Stanojević & Milunović, 2020). Budget is a financial expression of comprehensive plans in which income and expenditures planned for a year are expressed, and which are used for post-evaluation of the organization's performance (Gates & Germain, 2015). Budget process is a legally defined activity of the authorized bodies for the procedure of preparing, defining, adopting and executing budget. It consists of several phases (Pešić & Miljković, 2020):

1. budget preparation and creation (budget initiative, budget expenditure and income planning, preparation of draft budget and its proposal);
2. budget adoption;
3. budget execution;
4. budget execution control.

Budget preparation and creation

Work on draft budget is an important phase because through this process each government specifies principles, defines the character of budget policy and determines the purpose and intensity of intervention in the public and economic sector (Arsić et al., 2009).

A competent state service is responsible for the tasks of obtaining information, processing it and preparing an income and expenditure plan (Rouanet, 2023). In the Republic of Serbia, as in most countries, this is the responsibility of the ministry in charge of financial affairs, i.e. the Ministry of Finance. At the level of municipalities and cities, it is the job of the finance secretariat or service. Nevertheless, it is usual for final account for a previous year to be the starting point, at least, as far as position budget is concerned. However, "a good budget" starts from the main principles of a country's fiscal policy (Dash & Ansari, 2022; Ivanova & Ristić, 2020). It is most often related to other economic and financial laws passed in previous period, based on the projected economic policy. In principle, three methods are used for budget planning (Roseen & Gauer, 2011: 51):

- the method of automatic planning, which consists of a direct transfer of items from a previous budget to a new one (since it is not valid, it has been rejected in practice);
- the method of direct evaluation, where the starting point is a previous budget, namely the executed part of income and expenditures, with correction factors (growth of industrial production, trade balance, gross income, inflation indexes);
- indirect method, which, based on a previous budget, also takes into account the data obtained from beneficiaries of budget expenditures, using an estimate. Beneficiaries of funds are obliged to submit data such as the number and structure of employees, the scope and type of material costs, the level of funds allocated for maintenance and investments, as well as the level of funds necessary for new investments.

There has recently been a tendency to relate budget preparation phase to a general economic policy planned in the long run (couple or several years), in order to create a coherent basis both for budget planning and economic policy (Golubović & Janković, 2023). The Ministry of Finance creates draft budget and submits it to the

Government for review. It reviews this draft and makes a decision on budget. Draft budget contains an estimate of income, an estimate of expenditures, balance sheet, a special and normative part. Budget preparation process begins with writing a memorandum on an economic and fiscal policy for a specific budget year, and ends with budget law passed by the National Assembly of the Republic of Serbia (Marjanović & Radojević, 2011).

Budget acceptance and adoption

The Government submits a proposal budget to the National Assembly, and then a representative of the Ministry of Finance presents it to deputies. In the practice of the Republic of Serbia, this is a bill that can undergo changes through amendments. Then budget is voted on and, after its adoption, it is published in the Official Gazette. It is necessary to adopt budget before the beginning of budget year (Morgan, 2022), because, otherwise, the current budget will be implemented, reciprocally, which the Government makes a decision on. In practice, this period lasts three months at most.

In budget execution process, the irregularity of an adopted budget can occur. In this case, the Government prepares a proposal for changes - budget rebalancing and submits it to the National Assembly for adoption. There are many controllable and uncontrollable factors that affect the decision on budget adoption and each of them has to be evaluated and reviewed in the process (Isaac et al., 2015).

In the Republic of Serbia the fiscal year coincides with a calendar year and lasts from January 1 to December 31. Nevertheless, budget process is long-lasting and the preparation of the Law on the Budget of the Republic for a following year begins already on February 15 of the current year, when the minister responsible for finance affairs gives instructions to budget beneficiaries on how to propose priority fields for financing in a following year. The process of preparing and adopting budget and financial plans is carried out according to budget calendar, and should be completed by December 15, so that budget year starts on time, from January 1 (Vladisavljević & Pešić, 2018).

Budget execution

Budget execution represents generating income, on the one hand, and financing needs of budget funds beneficiaries, on the other, as defined by budget (Baas et al., 2018). Budget can only be implemented after its adoption (Pešić & Miljković, 2020: 25). If budget is well-prepared, it can be implemented, but if it is poorly prepared, it is, almost without exception, poorly implemented (Anđelković, 2010). If it has been adopted before the beginning of budget year, it will be implemented at the beginning of year. The budget adopted during the year can be implemented only after its adoption and publication in the Official Gazette.

Budget execution process begins with the first payment in favour of public revenue. By providing funds, conditions are created for the execution of expenditure

party, which is taken care of by competent authorities, i.e. the state administration bodies that are responsible for budget execution and have the right to dispose of the collected funds (Khudaykulova et al., 2022). On the basis of an execution plan, they will transfer funds to budget beneficiaries, who can be direct or indirect. Indirect budget beneficiaries receive these funds through competent ministry, funds or joint organizations. These organizations accumulate funds and transfer them to indirect beneficiaries according to special approval. In this way, more direct control of budget funds spending is achieved.

Depending on the function they perform in budget execution process, the state administration bodies can have the role of an instructing party or a financial executing party. An instructing party has the authority to dispose of budget funds. It issues paying instructions, that is, the distribution of public revenue. A financial executing party is the state administration bodies that collect funds, execute expenditures of an instructing party or manage budget funds (Kostić, 2020). These authorities are divided among several state administration bodies, and most of them belong to the Ministry of Finance bodies, namely the Treasury Administration and the Tax Administration. They can manage funds only according to the order of an instructing party.

Funds are allocated on the basis of periodic plans. First, three-month plans are developed, and, if necessary, monthly plans. Competent authorities also take into account the dynamics of the payment of public revenue. In the period of the weak collection of some forms of public revenue, i.e. the current budget deficit, the Government has to intervene by borrowing from the National Bank or proposing to increase some excise taxes or other budget revenues. This proposal is submitted to the National Assembly in the form of a law on amendments to the law.

Budget execution control

Huge budget funds that include about a half of national income represent, mainly, its redistribution and consumption. Timely collection of these funds and optimal satisfaction of social needs, as well as their rational use, saving and planning, require specific control over all bodies vested with the collection, management and spending of public funds (Kurniawan & Soediantono, 2022). In budget execution, there is a possibility of overrun, irrational use of funds, changes in use, waste of social funds, etc., so specific control is necessary during their development and use. In the Republic of Serbia, budget control is conducted by budget inspection, and audit is executed by a competent auditing institution (Stoilkov & Ivanova, 2017).

Considering all phases that budget goes through, from initiative to execution, and many diverse cash flows, its control could not be left to a single authority, because *"in order to be effective, it has to be multiple"* (Lovčević, 1975). On the other hand, it has to be carried out in all phases of budget cycle, in order to include all authorities engaged in budget execution and all phases that financial resources pass through.

The Government and other representative bodies are given full powers to approve and execute budget. However, in all states, legislator retains the right of control, in order to ensure the proper use of budget funds. The right of control is usually vested with the authority that passed it. As it is usually the parliament, a specific body is usually organized to prepare control materials and conduct it on behalf of the parliament.

The main forms of budget execution control, according to time and method of action, are preventive - prior and subsequent control (Grbić & Jovanović, 2020). The control of the use of funds for financing public expenditures is carried out within the Ministry of Finance, that is, a competent administrative body for financial affairs (budget inspection), which is performed by budget inspector. In order to provide legal and proper budget execution, budget inspection performs direct control of the spending of funds for certain purposes, as well as the control of the financial and material operations of beneficiaries of budget funds. Direct control of the spending of funds for certain purposes, means the control of calculation, disbursement, transfer and intended use of funds (Röhl et al., 2023). If some deficiencies are noticed while performing direct control, budget inspection will propose measures and deadlines for their elimination to a beneficiary of funds. If beneficiary does not comply with proposed measures within a stipulated deadline, they will be implemented by the authority responsible for auditing public expenditures. A competent control authority submits a report on the executed control along with final account.

After the end of the year in which budget has been implemented, the creation of final account for budget, which represents the control of budget year (the period from January 1 to December 31), will begin. Draft final account is done by the Ministry of Finance in the form of a law. Draft law is submitted to the Government by the end of February of the following year for previous year, and the Government submits draft law to the Parliament for review and adoption. In this way, final account is also an instrument for controlling budget execution by the National Assembly.

The sources of the defence system financing

The imperative of the financing policy of every society is financing the defence system from national sources. However, in situations where a country is threatened to such an extent that it is not possible to provide necessary funds from national sources, the engagement of foreign sources is also allowed (Kostić et al., 2018). The defence expenditure financing represents a monetary expression of the material satisfaction of the defence needs (Miletić, 2009). The sources of financing the defence expenditures can be divided into peacetime and wartime, on the one hand, or main and other sources of financing expenditures, on the other hand. The main type of the expenditure financing is budget income (Emad Fadoul et al., 2023), while other sources of financing include income, donations, aid, loans, etc.

If the fact that the defence system is a part of the social system is taken into consideration, the main sources of its financing have to be the same as for financing the total public spending, that is, the source of its financing is gross domestic product for the current period. In their 2008 research, Kentor and Kick proved that an increase in military spending per soldier increases gross domestic product per capita (Kentor & Kick, 2008). In his very extensive study, Ando mentioned data from 109 economies, including thirty of them being members of the Organization for Economic Cooperation and Development, and found out that economies grow as defence spending increases (Ando, 2009).

The defence expenditures and their classification according to types of spending

The main commitment in planning financing the defence system is to ensure the development of necessary capabilities of the defence system elements with most favourable expenditure structure (Fischer et al., 2023). The defence expenditures in most countries are classified into three parts: those related to personnel, operating costs and investment allocations. The optimal expenditure structure implies a ratio of 40% : 30% : 30% (personnel/operating/investment), while a ratio of 50% : 30% : 20% is also considered favourable (Kostić et al., 2018). Anything above 50% for personnel costs is considered excessive, as well as anything below 20% for investments – insufficient.

The budget of the defence system is executed as a part of the budget of the Republic of Serbia and in compliance with the Regulation on the Planning, Programming, Budgeting, and Execution. It is followed through three groups:

- personnel costs (salaries, allowances, benefits and individual social benefits for employees);
- operating costs (life and work of units and institutions);
- investment costs (*expenditures for infrastructure*: purchase, construction and capital maintenance of buildings and facilities, *expenditures for equipping* with weapons and military equipment, modification of materiel, a major overhaul and commodity reserves).

The desired cost structure should enable a greater share in the total costs of the part related to investment and operating costs, while at the same time reducing the share of personnel costs. The Planning, Programming, Budgeting, and Execution System (PPBE) is the defence resource management process that links goals and results in a modern, systematic and efficient manner. The most important part of the PPBE process is budgeting phase, which presents necessary financial resources for the execution of planned activities, projects and programmes within the main programmes (Knežević, 2008).

The comparative analysis of the defence system costs of the Republic of Serbia and the NATO member states in 2021

The comparative cost analysis has been carried out in order to review and compare the defence parameters of the Republic of Serbia with the defence parameters of neighbouring countries and the NATO member states that have approximately the same number of residents or territory as the Republic of Serbia (Belgium, Greece, Latvia, Lithuania, Portugal and Czechia). In this way, one gets a picture of the size and expenditures of the Republic of Serbia in comparison to the Armed Forces of the NATO states and neighbouring countries, whose individual characteristics are close to Serbian values. This comparative analysis of financing the defence expenditures aims to show where the defence system of the Republic of Serbia is in relation to the studied countries, and also to consider foreign experiences. Foreign experiences are always one of the influencing factors when defining military organization, for at least two reasons. Firstly, because some of foreign armed forces can be considered a potential opponent and, secondly, as an experience that can be implemented in one's own practice.

In recent years, there has been a trend of reducing the defence costs in many countries. The reasons for this are the economic crisis, COVID-19, and also the altered character of security challenges and threats. In order to fully consider the defence costs of some countries, it is necessary to take into account several different indicators, such as the share of the defence costs in gross domestic product, the total defence costs, the defence costs in relation to the number of residents, the defence costs per soldier and the cost structure of the defence system.

In order to conduct a comparative analysis of the defence parameters, the data were collected using the method of content analysis from the Decision on Financing the MoD of RS for 2021 and available sources (GBS, 2023; IMFWE, 2023; NATO, 2023), and they are presented in Table 1.

Table 1 – *The expenditures for financing the defence system of the Republic of Serbia, neighbouring countries and the NATO member states in 2021 (* – in USD million)*

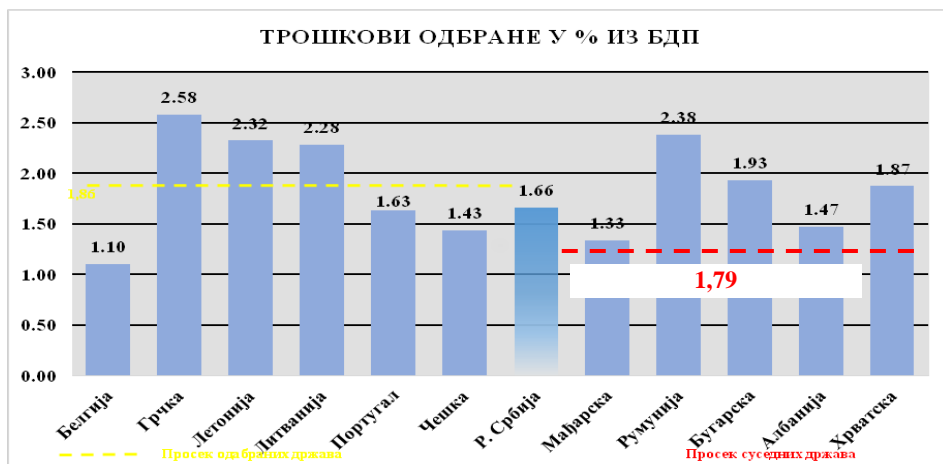
State	Area km2	Number of residents	AF active component	Defence costs*	% GDP	Costs per soldier	Costs per capita
Belgium	30,528	11,320,515	25,200	5,173	1,10	205,278	457
Greece	131,940	10,944.407	107,600	4,785	2,58	44,470	437
Latvia	64,589	1,966,176	7,000	722	2,32	103,143	367
Lithuania	65,200	2,870,087	16,300	1,118	2,28	68,589	390

State	Area km2	Number of residents	AF active component	Defence costs*	% GDP	Costs per soldier	Costs per capita
Portugal	92,391	10,336,503	28,700	3,472	1,63	120,976	336
Czechia	78,866	10,512,400	26,800	3,038	1,43	113,358	289
SERBIA	88,499	8,737,371	24,984	1,009	1,66	40,386	115
Hungary	93,030	9,845,142	22,700	1,829	1,33	80,573	186
Romania	238,391	19,511,000	64,500	5,498	2,38	85,240	282
Bulgaria	110,994	7,134,564	25,600	1,195	1,93	46,680	167
Albania	28,748	2,876,591	6,700	210	1,47	31,343	73
Croatia	56,594	4,284,889	15,200	986	1,87	64,868	230

(Source: Prepared by the author according to GBS, 2023; IMFWE, 2023; NATO, 2023)

The share of the defence costs in gross domestic product

Graph 1 presents data on the percentage of gross domestic product that is allocated to finance the defence costs.



Graph 1 – The share of the defence costs in GDP of the mentioned countries in 2021

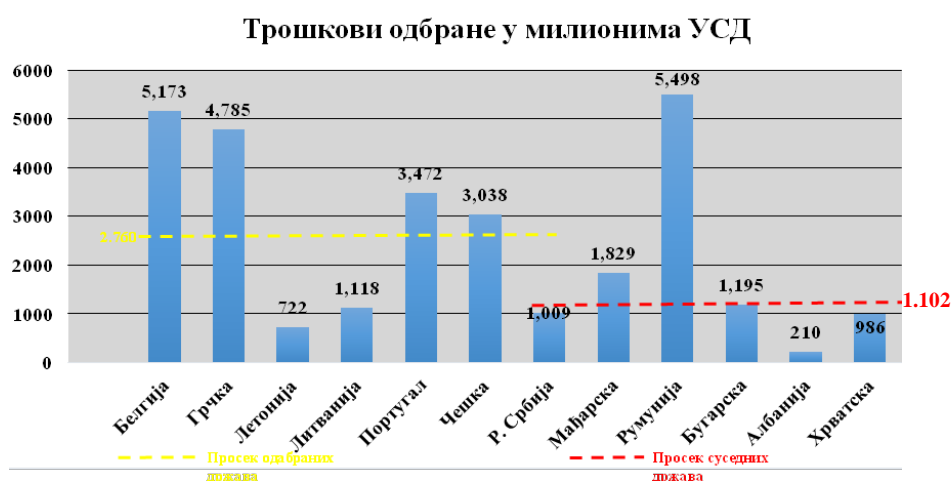
(Source: Prepared by the author according to GBS, 2023; IMFWE, 2023; NATO, 2023)

Among the countries that have been analysed in this research, Greece has the highest allocations for defence in GDP - 2.58%, and Belgium the lowest - 1.10% and Czechia in the amount of 1.43% of GDP. In 2021, the Republic of Serbia recorded below average allocations for financing the defence costs compared to neighbouring countries. The average share of the defence costs of neighbouring countries amounts to 1.79% of GDP. The ratio of the defence costs to GDP is the highest in Romania - 2.38% and Bulgaria, where it is 1.93% of GDP, and the lowest in Hungary – 1.33% of GDP. The values of the considered parameter related to neighbouring countries are uniform; the only pronounced deviation was recorded in Hungary and Albania, where the value of this parameter is lower than the average in the neighbourhood.

Total defence costs

Graph 2 presents the defence costs of the NATO member states and neighbouring countries in 2021. Belgium has the highest defence costs, on the example of the analysed countries, in the amount of USD 5,173 million, followed by Greece – USD 4,785 million and Portugal with USD 3,472 million. Latvia – USD 722 million and Lithuania – USD 1,118 million allocate the lowest defence costs.

The defence costs of the Republic of Serbia are lower than the amount of the defence costs of most analysed countries, excluding Latvia. Taking into account the criterion for defining similarity (area, number of residents), it is expected that the defence costs will also move in the same range. However, this is not the case with any considered country except for Latvia, while Belgium, Greece, Portugal and Czechia have a pronounced positive deviation of the defence costs in relation to the Republic of Serbia.



Graph 2 – The total defence costs of the mentioned countries

(Source: Prepared by the author according to GBS, 2023; IMFWE, 2023; NATO, 2023)

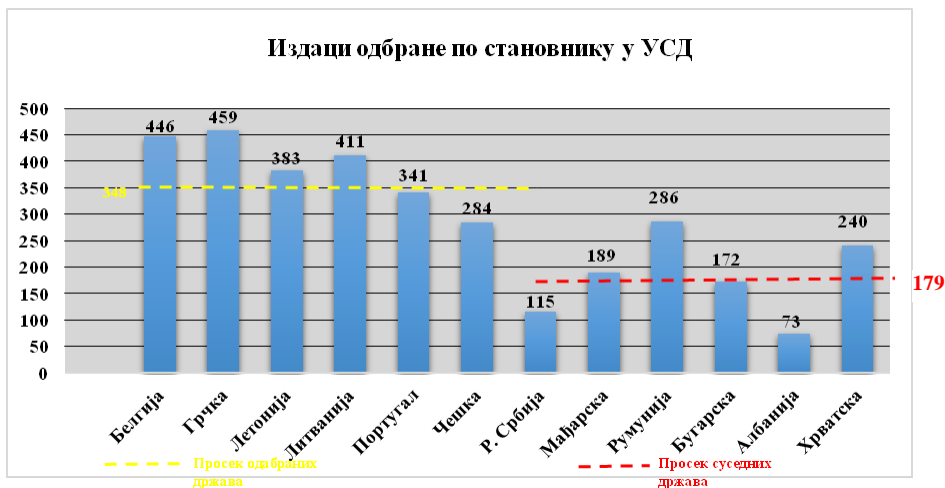
The defence costs of neighbouring countries vary from country to country. Albania has the lowest defence allocations, in the amount of USD 210 million, and Romania has the highest – USD 5,498 million. The defence costs of the Republic of Serbia in 2021 amounted to USD 1,009 million.

In comparison to its neighbours, Serbia has lower defence costs than Romania, Hungary and Bulgaria, and higher than Croatia and Albania. In relation to the average value of the considered parameter for neighbouring countries that are NATO members, which amounts to USD 1,102, the uniformity of the defence allocations is noticeable in all countries, except for Romania, where there is a rather positive deviation from the average and a negative deviation for Albania. Due to a great deviation in the defence costs of neighbouring countries, the arithmetic mean does not show the real mean value, so the median has been calculated for the average costs.

The defence costs per capita

Graph 3 presents the differences in the average defence costs of the mentioned countries per capita. The highest costs per capita are in Greece - USD 459 and Belgium in the amount of USD 446, while Czechia has the lowest and they amount to USD 284. The Republic of Serbia has by far the lowest defence costs per capita, even three to four times lower than the average of the considered countries.

Analysing neighbouring countries by the parameter of the defence costs per capita, the average value is about USD 179. Romania has the highest defence costs per capita - USD 286, followed by Croatia with USD 240. Albania has the lowest costs - USD 73, while Serbia is rather below the average with USD 115.

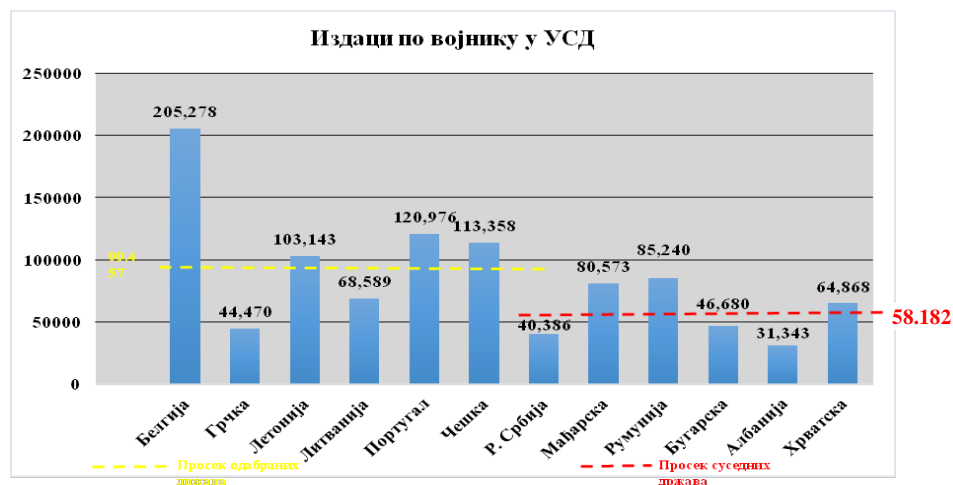


Graph 3 – The average defence costs per capita of the mentioned countries
 (Source: Prepared by the author according to GBS, 2023; IMFWE, 2023; NATO, 2023)

The defence costs per soldier

Graph 4 presents the average defence costs per soldier for a selected sample of countries. Belgium has the highest defence costs per soldier - USD 205,278, and Greece has the lowest – USD 44,470. Portugal, Czechia and Latvia are at the same level of costs, while Lithuania has below average cost values.

On the example of neighbouring countries, only Greece has approximately the same costs compared to the Republic of Serbia, while other countries have rather higher defence costs per soldier. In the value of the defence costs per soldier for neighbouring countries, Romania leads with USD 85,240, immediately followed by Hungary with USD 80,573, while the average amount of costs is USD 58,182. All neighbouring countries, except Albania, have higher defence costs per soldier compared to Serbia.



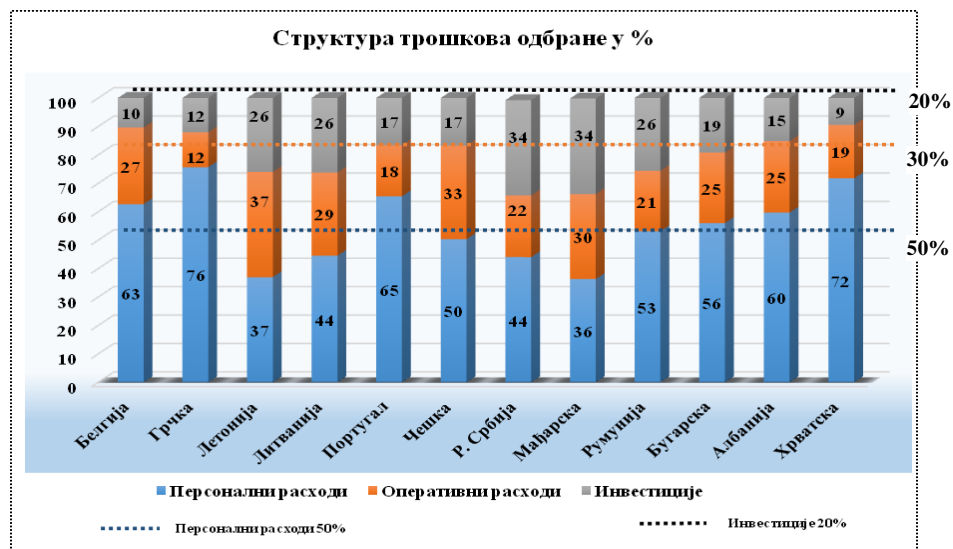
Graph 4 – The average defence costs per soldier in the mentioned countries
(Source: Prepared by the author according to GBS, 2023; IMFWE, 2023; NATO, 2023)

The defence expenditure structure

As it has already been pointed out, the defence costs in most countries are viewed through three aspects (costs for personnel, operating costs and investment), where their mutual relationship is defined through an optimal, favourable, or unfavourable structure in the total expenditure structure. The comparative analysis of the defence expenditures of the studied countries has shown that only Lithuania and Czechia have a more favourable structure of the defence expenditures compared to the defence expenditures of the Republic of Serbia (personnel costs – 44%; operating costs – 22% and investment – 34%).

As it can be noticed in Graph 5, Bulgaria has the most favourable structure of the defence costs among neighbouring countries (personnel costs – 56%; operating costs – 25% and investment – 19%), and Croatia has the least favourable (personal costs – 72%; operating costs – 19% and investment – 9%).

External factors, such as the geopolitical environment, the degree of "endangerment" of the state itself, and also the contemporary understanding and trend of the defence financing in the surrounding countries influence the level of allocation of funds for the defence financing. However, financing the defence system depends to a great extent on *internal factors* of society, i.e. the state ability to allocate funds from gross domestic product in a certain amount for defence. If it is taken into account that "competitive alternatives" to defence and the means for its financing are public sector activities, such as education, healthcare or social welfare system, with highly valued goals and requirements, the need arises to inevitably increase political pressure on the protection of such aspirations.



Graph 5 – The structure of the defence costs of the mentioned countries
 (Source: Prepared by the author according to GBS, 2023; IMFWE, 2023; NATO, 2023)

The mood of political actors in a state, as internal factors of society, is also reflected in the fact that the Law on the Budget is adopted in the parliamentary procedure, which indicates that the current relationship between political forces, as well as their "treatment and mood" towards defence, as a state function, influences its budget. Therefore, financing the defence expenditures depends on the achieved level of economic development of a country and the level of the accomplished gross domestic product, and also on the mentioned internal and external factors. On the basis of the obtained results

of the comparative analysis, it has been concluded that the percentage of allocation from GDP for defence is constantly below 2%, but that a positive growth trend is noted, which in previous years is getting closer to the target value.

Compared to other countries, the defence costs of the Republic of Serbia, expressed as a percentage of GDP, are approximately at the average level of both selected and neighbouring NATO member states. However, the average defence costs of the Republic of Serbia per capita and per number of soldiers are much lower compared to the countries relevant for comparison, as well as most of the surrounding countries. When it comes to the structure itself, typical countries have a very different structure of the defence costs. It is unfavourable in most countries and does not provide adequate development of the system. The Republic of Serbia is approximately at the level of the average of neighbouring countries, with a recorded trend of improvement in the cost structure itself, as well as the total allocation for defence, which is relatively favourable and gives the opportunity for optimal development of the defence system, and thus the military.

Conclusion

The projected defence system should be rational, efficient and capable of eliminating armed threats to security, actively contributing to the establishment and strengthening of a favourable security environment and improving partnership relations on a multilateral (NATO, OSCE, UN, etc.) and bilateral basis. In order for the system to be capable of responding to these requirements, the military has to be modernly equipped and organized, economically viable, adequate for the needs of the society it protects and the time in which it operates, and capable of successfully conducting assigned missions and tasks. In order to make the projected defence system applicable, it is necessary to rationalize costs through operational efficiency, effectiveness and economy of the defence decision-makers, encouraged by political support, and also accompanied by an appropriate strategy.

Operational efficiency, effectiveness and economy only temporarily solve a problem. Due to uncertainty and indeterminacy (inevitable followers of long-term plans and strategies), they help to overcome problems and risks that arise on the way to the execution of long-term plans and strategies. From a long-term perspective, success in the accomplishment of goals in terms of expenditure management and efficient resolution of open items can only be achieved by defining and implementing an appropriate strategy. Taking into account all the specificity of the defence financing, which arises from the mentioned characteristics of the military organization itself, the defence management, in cooperation with political representatives of the government, has the task of creating favourable conditions for defining achievable plans and adequate strategies harmonized with real financial capabilities and urgent needs.

The objective of this paper is, first of all, to emphasize the noticed shortcomings in financing the defence expenditures and to identify possibilities for its improvement, which would create a starting basis for future more complex research on this issue.

The importance of the paper is reflected in the use of the results obtained through the comparative analysis of the defence parameters of the Republic of Serbia with the parameters of characteristic countries and neighbouring NATO states, that is, to define the position of the Republic of Serbia in relation to the studied countries and to consider the current trend in the structure of expenditures and the allocation of financial resources for defence, and to consider, in some future time, the results of the undertaken measures, with, of course, the possibility of timely correction.

Literature

[1] Anđelković, M. (2010). *Budžetsko pravo*. Centar za publikacije Pravnog fakulteta u Nišu, Niš.

[2] Ando, S. (2009). The impact of defense expenditure on economic growth: Panel data analysis based on the Feder Model. *The International Journal of Economic Policy Studies*, 4 (8), 141-154.

[3] Arsić, M., Randelović, S. & Altiparmakov, N. (2009). *Mogući pravci reforme poreza na dohodak građana u Srbiji*. Kvartalni monitor br. 17., FREN, Beograd.

[4] Baas, J., Augustine, S., Marques, G. & Dorne J.L. (2018). Dynamic energy budget models in ecological risk assessment: From principles to applications. *Science of The Total Environment*, Vol. 628–629, 249-260.

[5] Dash, B., & Ansari, M. F. (2022). Self-service analytics for data-driven decision making during COVID-19 pandemic: An organization's best defense. *Academia Letters*, 2.

[6] Emad Fadoul, H., Albano, L. J., Bergman, M. E., Phillips, M. A., & Johnson, M. T. (2023). Assessing the Benefits and Costs of the Hydrogen Cyanide Antitherbivore Defense in *Trifolium repens*. *Plants*, 12(6), 1213.

[7] Fischer, S., Duffield, C., Davidson, A. J., Bolton, R., Hurst, J. L., & Stockley, P. (2023). Fitness costs of female competition linked to resource defense and relatedness of competitors. *The American Naturalist*, 201(2), 256-268.

[8] Gates, S. & Germain, C. (2015). Designing complementary budgeting and hybrid measurement systems that align with strategy. *Management Accounting Quarterly*, 16 (2), 1-9.

[9] Golubović, M., & Janković, G. (2023). Priliv stranih direktnih investicija u funkciji poboljšanja konkurentnosti privrede Republike Srbije. *Održivi razvoj*, 5(1), 19-31. <https://doi.org/10.5937/OdrRaz2301019G>

[10] GPS – Global Population Statistics. (2023). Preuzeto: 19/05/2023 sa <https://www.worldometers.info/population/countries-in-europe-by-population>.

[11] Grbić, M. & Jovanović, D. (2020). Komparativni finansijski sistemi – implikacije za ekonomski rast. *Oditor*, 6 (1), 49-65.

[12] IMFWE – International Monetary Fund World Economic. (2023). Preuzeto: 19/05/2023 sa <https://www.imf.org/en/Publications/WEO/weo-database/2021/October>.

[13] Isaac, L., Lawal, M. & Okoli, T. (2015). A Systematic Review of Budgeting and Budgetary Control in Government Owned Organizations. *Research Journal of Finance and Accounting*, 6 (6).

- [14] Ivanova, B. & Ristić, S. (2020). Akumulacija i koncentracija kapitala. *Akcionarstvo*, 26(1), 26-34
- [15] Kentor, J. & Kick, E. (2008). Bringing the military back in: Military expenditure and economic growth 1990 to 2003. *Journal of World Systems Research*, 14 (2), 142-172.
- [16] Khudaykulova, M., Yuanqiong, H., & Khudaykulov, A. (2022). Economic consequences and implications of the Ukraine-russia war. *International Journal of Management Science and Business Administration*, 8(4), 44-52.
- [17] Knežević, M. (2008). Budžetiranje kao faza procesa PPBI u Ministarstvu odbrane. *Vojno delo*, 60 (4), 95-110.
- [18] Kostić, R., Knežević, M. & Lepojević, M. (2018). Struktura rashoda za finansiranje odbrane Republike Srbije. *Oditor*, 4 (1), 171-182.
- [19] Kostić, R. (2020). Revizija ostvarivanja ciljeva budžetskih programa. *Održivi razvoj*, 2(1), 41-52. <https://doi.org/10.5937/OdrRaz2001041K>
- [20] Kurniawan, W., & Soediantono, D. (2022). The Role of Digital Transformation and Leadership Style on Financial Performance of Defense Industries. *Journal of Industrial Engineering & Management Research*, 3(3), 111-119.
- [21] Lovčević, J. (1975). *Institucije javnih finansija*. Novinsko izdavačka ustanova Službeni list, SFRJ, Beograd.
- [22] Marjanović, D. & Radojević, P. (2011). Kontrola budžeta i finansiranje javnih potreba. *Strategijski menadžment i sistemi podrške odlučivanju u strategijskom menadžmentu*, Ekonomski fakultet Subotica.
- [23] Miletić, M. (2009). Sistem finansiranja rashoda odbrane u Republici Srbiji. *Vojno delo*, 61 (2), 126-147.
- [24] Morgan, J. (2022). Systemic stablecoin and the defensive case for Central Bank Digital Currency: A critique of the Bank of England's framing. *Research in International Business and Finance*, 62, 101716.
- [25] NATO – North Atlantic Treaty Organization. (2023). Preuzeto: 19/05/2023 sa https://www.nato.int/nato_static_fl2014/assets/pdf/2021/6/pdf/210611-pr-2021-094-en.pdf.
- [26] Pešić, H. & Miljković, M. (2020). Održivost budžetskih načela i principa. *Održivi razvoj*, 2 (2), 15-29.
- [27] Röhl, K. H., Bardt, H., & Engels, B. (2023). *A new era for the defense industry? Security policy and defense capability after the Russian invasion of Ukraine* (No. 1/2023). IW-Policy Paper.
- [28] Rosen, S. H. & T. Gauer 2011. *Javne finansije*. CID – Ekonomski fakultet, Beograd.
- [29] Rouanet, L. (2023). Foutu maximum: The political economy of price controls and national defense in revolutionary France. *Explorations in Economic History*, 88, 101478.
- [30] Stanojević, S. & Milunović, M. (2020). Okončanje postupka državne revizije. *Akcionarstvo*, 26 (1), 35-48.
- [31] Stoilkov, V. & Ivanova, B. (2017). Finansiranje Ministarstva odbrane i Vojske Srbije sopstvenim prihodima. *Oditor*, 3 (3), 2017, 191-131.
- [32] Vladislavljević, V. & Pešić, H. (2018). Budžetska procedura u Republici Srbiji – izrada, donošenje i usvajanje završnog računa budžeta. *Oditor*, 4 (2), 93-103.

Summary

The defence financing system has been studied since the 1960s and includes research on defence problems in various economic fields. In general, defence is treated as a public good of national economy, but it has to be taken into account that the defence economy analyses the interdependence of defence and national economy in different aspects. After the Cold War, the reduction of the defence costs has also been perceived as a peace benefit, and the allocation of funds to finance the defence costs has been considered a burden on the economy. However, nowadays the world is increasingly facing unconventional conflicts, such as terrorism, which require considering defence problems from a new perspective and changing security measures.

After the global bonus, global military spending has sharply escalated, despite some decline in military personnel worldwide. The need to achieve the highest level of readiness and capability of the defence system for its engagement is conditioned by the decisions of the state leadership expressed through national interests. The accomplishment of this goal is conditioned by limitations of a financial character. The financing of the defence system of the Republic of Serbia, as a direct beneficiary of budget funds, is primarily regulated by the Law on the Budget System of the Republic of Serbia, as it is defined by the Law on the Budget of the Republic of Serbia for a given year.

This research has two objectives. The main objective is to consider the possibilities for a more efficient and effective use of the public expenditure allocated for the defence system, while a special objective is to identify the problem of budget distribution and emphasize the structuring of more favourable distribution of the defence expenditures in order to improve the current situation in the Ministry of Defence and the Serbian Armed Forces.

The structure of this paper consists of three parts. The first part describes in detail budget process and its phases, the second part focuses on the sources of financing the defence system and the classification of the defence spending according to the type of expenditure, and the third part presents the comparative analysis of the defence costs of the Republic of Serbia with the defence costs of neighbouring countries and some NATO member states.

Key words: *budget, budget system, financing, expenditures, costs*

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