

# Analysis of Trends in Defence Funding in the Member States of the North Atlantic Alliance

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## Abstract

The aim of the article is to analyse the impact of the development of security threats on the financing of the defence capabilities of NATO states. The author is based on the theory of defence financing as a public good and the analysis of empirical data on the development of defence spending and the negative impact of the “free rider”. In the first part, attention is paid to the theoretical definition of defence from the point of view of economic theory, and in the second part to the analysis of defence expenditures in NATO member countries. The author draws on the works of renowned authors such as [2, 6, 14, 15]. In the first and second parts of the article, the author chose a positive approach. The author of the article conducted a literature search of theoretical literature and relevant political and legal documents of NATO, EU, Czech Republic and Slovak Republic. For the purpose of analysing the impact of security threats on military spending, the author analysed trends in NATO member states’ defence spending in the context of the “free rider” impact on the state’s defence capability.

**KEY WORDS:** *security, defence, state, alliance, conflict, defence spending, threats.*

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## 1. Introduction

Ensuring the security and defence of the state has always been one of the topics that attracted the attention of not only politicians, soldiers and security experts, but also economists [2, 10, 17, 35]. After long years of peace, due to the gradual deterioration of the global and regional security environment and the deepening of some security problems, issues of ensuring the security of states and the defence of their freedom, sovereignty, independence, territorial integrity and interests, as well as the defence and protection of their citizens, have become issues in recent years again very urgent [13, 14, 16].

The reason was mainly the continuous increase in tension in international relations, especially after the Russian annexation of Crimea in 2014 and Russian support for the separatist republics in the Ukrainian Donbas, the intensification of geostrategic competition, the growth of tension in relations between the great powers and the growth of several military, but mainly non-military security threats, which undoubtedly contributed to the deterioration of the security situation in several regions of the world [15]. The emergence of several new, primarily asymmetric, security threats in the form of international terrorism, illegal mass migration, proliferation of weapons, cyber-attacks on public and private computer networks and systems, etc. [17], together with the implementation of subversive hybrid activities, interference and influence through disinformation campaigns and propaganda [15], by foreign state and non-state actors with the aim of disrupting the functioning of democratic societies significantly influenced the view of ensuring the security and defence of states [18]. The sharp deterioration of the security situation on the European continent occurred after the military invasion of Ukraine by Russian Federation troops on February [1, 33], Walker [33]. Therefore, never in the past have peace, peaceful development, prosperity, and maintenance of the standard of living of the inhabitants of our planet, including the citizens of NATO member states, been so significantly dependent on the level of ensuring their security [16].

Therefore, in recent years, many political, legislative, organizational, economic, security and other measures aimed at increasing the level of their security and resistance to new threats had to be adopted in NATO member countries (but not only in them). For the reasons mentioned, in several countries in recent years they have changed, or updated security, defence

and military strategies (for example, in the Czech Republic in 2023, in the Slovak Republic in 2021, the security, defence and military strategies were updated). At the level of the Alliance, a new NATO strategic concept was adopted at the Madrid Summit in 2022 [22]. In addition, several new agreements on mutual cooperation (for example with the European Union [7–9]), initiatives and programs aimed at increasing defence spending, modernization and building new military capabilities were adopted at the NATO level before and after the outbreak of the conflict in Ukraine and capacity, growth in R&D investment, etc. (for example NATO Innovation Fund [23]), Defence Innovation Accelerator for the North Atlantic [24].

In connection with the above, the aim of this contribution is a theoretical view of the financing of defence as a public good (financed from public finances) in combination with empirical data in the form of the amount of defence expenditure allocated in the evaluated period in the member countries of the North Atlantic Alliance. In the first part of the paper, attention is paid to the theoretical definition of defence from the point of view of economic theory, and in the second part to the analysis of defence expenditures in the member countries of the North Atlantic Alliance. When preparing the paper, the author is based on the works of foreign authors: [10, 17, 27, 29, 30], as well as domestic authors [2, 12, 17, 27], who in their researches and works deal with issues of the economy and defence financing.

## 2. Theoretical Basis of Financing the Defence of the State

Ensuring defence, as a public good and an integral part of the public sector, is one of the primary tasks of every state. At the same time, it also belongs to the most expensive economic activities of the state. The issue of ensuring the defence of the state and its inhabitants is not only a political and military issue, but also an economic issue [2, 11, 12, 17, 32].

Historical experience confirms that the demands for economic support for the defence of the state and its citizens have constantly grown with the development of human society. This is also why, from the entire wide spectrum of factors acting to ensure defence needs, the economy represents one of the decisive factors. It represents the base of the defence of the state, because it secures it with the necessary resources. It can be concluded that the dependence of the construction of the defence force of the state on the economy has become much stronger over time, especially due to scientific and technical development, globalization, uncertainty, and the emergence of new asymmetric security threats [10].

Limited and scarce economic resources must be allocated to peace and defence and, depending on the situation or the nature of the threats, they must try to optimize the choice between defence and peace spending. This is also why the problems of the economic security of defence and its financing require incomparably greater interest than until now. The economic security of the state's defence should be stable, because in times of crisis and uncertainty, the feeling of danger is even more intense and the demand for defence and security grows [17].

Defence provision is a typical example of public goods. The benefits of these goods are so dispersed among the population that no single company or consumer has the economic motivation to provide them comprehensively and systematically. In this context [27], also claim that nothing is more important for society than its security and defence. Defence as a collective good cannot be divided into partial units because each individual consumes it as a whole. The benefit (benefit) that an individual derives from it does not reduce the benefit (benefit) for other members of society. Therefore, according to many authors, the marginal costs of additional consumption in defence are zero [28, 29, 31].

Regarding defence spending in the professional, security, military or economic literature, whether domestic or foreign, there is no single, unified and generally accepted definition or precise interpretation of the concept of defence spending. In addition, in the literature it is possible to meet the designation of military expenditure, arms expenditure or army expenditure, which, however, basically also include expenditure related to the defence of the state and it depends on the specific author who uses the term in his work. However, the terms defence spending and military expenditure are most often encountered.

In general, defence spending can be characterized as current and capital spending that states spend on ensuring their defence, that is, on the armed forces, on their maintenance and operation, training, on conducting operations on their own territory and outside the territory of the state, modernization, military research and development, infrastructure, military aid, salaries, social and health insurance for military and civilian personnel, etc. The amount of defence spending reflects the nature of the state's defence policy and its security, but mainly defence and military strategy. It provides information on the defence efforts of the state, the construction of the defence system of the state and, in particular, on the construction and development of the capacities and capabilities of the armed forces of the given state. At the same time, the amount of defence spending reflects the economic possibilities of the state [2, 11, 12, 17, 32].

Defence spending significantly affects the provision of peaceful life and the preparedness of the armed forces as the most important tool of the state to ensure defence, but also the creation of necessary material reserves, the development of military production, research and development of new military equipment, weapons and weapon systems, the preparation of the population and territory for defence, etc. Defence spending, by its size and nature, limits the possibilities of meeting the peaceful needs of society. The use of the concept of defence spending is primarily associated with the distribution of public funds from the state budget to ensure the implementation of individual goals and objectives in the overall system of ensuring the defence of the state [2, 12, 32].

In individual countries, this system is made up of several interconnected elements (e.g.: armed forces, land, air, naval, special forces, etc., national guard, border guard, intelligence services, defence industry, defence infrastructure, specialized state administration institutions, strategic stocks and reserves, civil defence, etc.), which act in favour of guaranteeing the defence of the state. In this context, certain costs arise in every state, the monetary expression of which is

defence spending. The amount of defence spending often also reflects how strong, or to what extent the country perceives the probability of the realization of threats against it, or the amount of aggression it wants to provoke. It also provides an idea of how much funding should be provided for defence in the coming fiscal years. Their height also reflects the landscape's ability to finance the activities of the armed forces [17, 28, 29].

Odehnal [26] presents a comprehensive literature review on the definition and influence of free riders on defence financing within the Alliance and the analysis of parasitic states. The non-excludability and indivisibility of benefits from collective defence necessarily leads to an unequal sharing of the costs of common defence among Alliance members. This aspect is a natural phenomenon, the so-called free riding. On the one hand, large, economically stronger states usually spend resources on defence at a certain agreed level (2% of GDP), possibly even a higher volume of resources. On the other hand, the governments of smaller countries usually do not comply with the agreed limit on the volume of resources. They take advantage of the so-called joint defence club membership financed by richer and larger allies. The resources "saved" in this way can be diverted by these governments to other needs that will help them get more preferential votes in the next election. Department of Defence budgets become the government's "last resort" for other spending with a higher voter preference. The willingness of properly contributing states to bear a greater burden of common defence when partners do not fulfil their obligations is not limitless. A breach of mutual trust arises between the partners and leads to contradictions, subsequently to the inefficiency of defence spending and the weakening of the defence capabilities of the member states and the loss of the coalition's ability to act.

### 3. Investigation Results

A certain easing of tension in international relations at the beginning of the second decade of the 21st century, caused the member states of the North Atlantic Alliance to gradually start reducing defence spending again. Since all NATO member states that sent their military units to operations Iraqi Freedom (2003–2011) in Iraq and Enduring Freedom (2001–2014) in Afghanistan (replaced in 2014 by operation Resolute Support) gradually withdrew their troops in the first years of the second decade or significantly reduced the number of their units and soldiers in Iraq and Afghanistan, this reduction was also reflected in their defence budgets (see Fig. 1). The reduction primarily concerned expenses associated with the training, deployment, replacement, maintenance, and withdrawal of military forces in military operations outside the states' own territory.

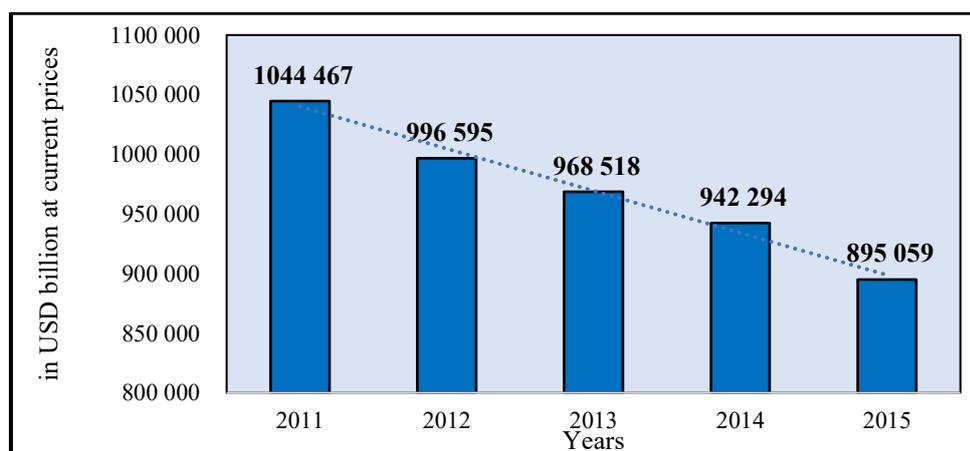


Fig. 1. Trend of defence spending development in NATO member countries in 2011–2015 (in USD billion at current prices) Source: [20]

The turnaround in development occurred mainly under the influence of the crisis events following on the one hand, the change of regime in Ukraine and the subsequent annexation of Crimea by the Russian Federation, and on the other hand, the successful offensive of the Islamic State in Syria and Iraq. In the first case, in November 2013, after former Ukrainian President Viktor Yanukovich did not sign an association agreement with the European Union and the police cracked down on pro-European demonstrators, mass demonstrations and violence in Freedom Square in Kyiv took place in December 2013, leading to the recall President Yanukovich and his government and the election of Oleksandr Turchynov as the interim president of Ukraine and the appointment of a new, pro-European government headed by Arseniy Yatsenyuk [3]. Subsequently, in March 2014, after a disputed referendum on the status of Crimea, initiated by the pro-Russian leadership of Crimea, which did not recognize the new Ukrainian government formed after anti-government riots, the overwhelming majority of voters voted for its annexation to Russia. The Republic of Crimea and the city of Sevastopol were declared subjects of the Russian Federation. However, neither Kiev nor most of the international community recognized this move. The crisis in Ukraine continued in April 2014, when pro-Russian activists declared an independent Donetsk People's Republic and Luhansk People's Republic in eastern Ukraine [5].

From an international perspective, the Ukraine crisis has caused the most serious crisis in mutual relations (not only) between NATO and Russia since the end of the Cold War and has led to the adoption of a large number of political, economic, security, military, organizational and legislative measures on both sides, including the imposition of a large number of

sanctions and retaliatory sanctions. From a military-security point of view, the Russian annexation of Crimea and other military activities (e.g. large-scale military exercises of the Russian armed forces near the borders with the Baltic countries, violations of the airspace of NATO member states by Russian bombers and fighter jets or territorial waters by Russian submarines, etc.) in a significant way increased the sense of threat especially in those member states of the Alliance that are directly adjacent or lie close to the borders with Russia and Ukraine.

In the second case, the Islamic State organization, during the civil war in Syria, gained control over large parts of Syria from April 2013 and, after a rapid offensive in the summer of 2014, also over parts of the territory of neighbouring Iraq. After capturing Mosul, Iraq in June 2014, the organization declared a caliphate based on a strict interpretation of Islamic Sharia law in the conquered territories. The organization belongs to Sunni Islam and strongly opposes followers of Shiite Islam and other religions. Islamic State has become known for committing brutal terrorist attacks and war crimes, including mass executions of captured soldiers and civilians. In the conquered territories, he committed general violations of human rights and brutally oppressed all religious groups that do not follow their strict version of Islam, committing extensive violence mainly against Shiites, Yazidis and Christians, but also against Sunnis who were in opposition. These activities have reached such a scale in Syria and Iraq that the United Nations and human rights organizations accuse the Islamic State of committing ethnic cleansing and genocide.

After 2014, a broad international coalition headed by the USA was formed against the Islamic State, which led attacks on its territory in a joint action until 2019. Other activities leading to the liberation of territories controlled by the Islamic State were led by Russia and Turkey. The campaigns and activities of individual actors were relatively successful, and by the end of 2018, the vast majority of the territory was liberated from militants [35]. The above-mentioned matters required not only the initiation of preparations for the re-updating of security, defence and military strategies, but also the preparation and adoption of new military doctrines and concepts at the national and joint alliance level, aimed at increasing the level of defence against military and non-military threats. These activities and measures were, of course, also reflected in the countries' defence budgets in the form of an increase in defence spending (see Fig. 2). It is evident from (see Fig. 2 that after 2015 there is a turn in the development of military expenditures. In 2019, spending is approaching 2011.

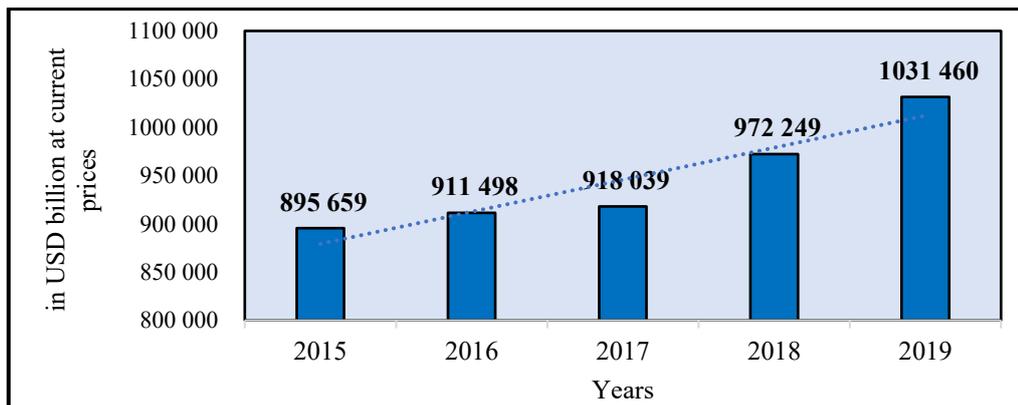


Fig. 2. Defence spending development trend in NATO member countries in 2015–2019 (in USD billion at current prices) Source: [21]

The growth of defence spending in the member states of the Alliance continued – primarily in connection with the Russian threat – in the following years as well. Several sharp statements by former US President Donald Trump to European allies also have a certain share in this, as he repeatedly accused the leaders of European NATO member states of abusing the benefits of collective defence and at the same time called on them personally or through their ministers of defence and foreign affairs to increase their defence spending to the level of at least 2% of GDP [6]. At the same time, he warned them that if they do not increase their defence spending, the United States will reconsider its current approach to guaranteeing security and defence on the European continent [4]. On his account on the social network Twitter, he even stated his idea that allies should prospectively spend up to 4% of GDP on defence [19]. NATO Secretary General Jens Stoltenberg also commented on the mentioned problem several times, who repeatedly emphasized that NATO is based on the principle of solidarity one for all and all for one. If on the one hand everyone enjoys the protection of NATO, on the other hand everyone must also contribute with their obligations towards NATO. He added that he understands that increasing the defence budget is not easy and that the issue of increasing funds for the army is currently extremely sensitive. “The current crisis in Ukraine clearly proves that defence still matters. Defence costs something, but if we didn’t secure it, it would cost us even more,” declared the head of the North Atlantic Alliance. When presenting the Alliance’s new plans, he also appealed, primarily to the Alliance’s European members, to fulfil the alliance’s commitment to spend 2% of GDP on defence [31].

However, the primary reason for the growth of defence spending in NATO member states was really diverse Russian activities causing concern among the allies (for example, the gathering of troops on the border with Ukraine, cyber-attacks, disinformation campaigns, propaganda, misuse of energy supplies, etc). The culmination of these activities was the military invasion of Ukraine February 24, 2022, which, on the one hand, represents the return of a high-intensity international armed conflict to the European continent, and on the other, an additional impetus for NATO to increase the intensity of its efforts

to ensure a higher level of collective defence Ukraine has fully realized the necessity of having adequate military capabilities and capacities necessary for its own defence, as evidenced by the growth of defence expenditures allocated by the regions from their state budgets (see Fig. 3).

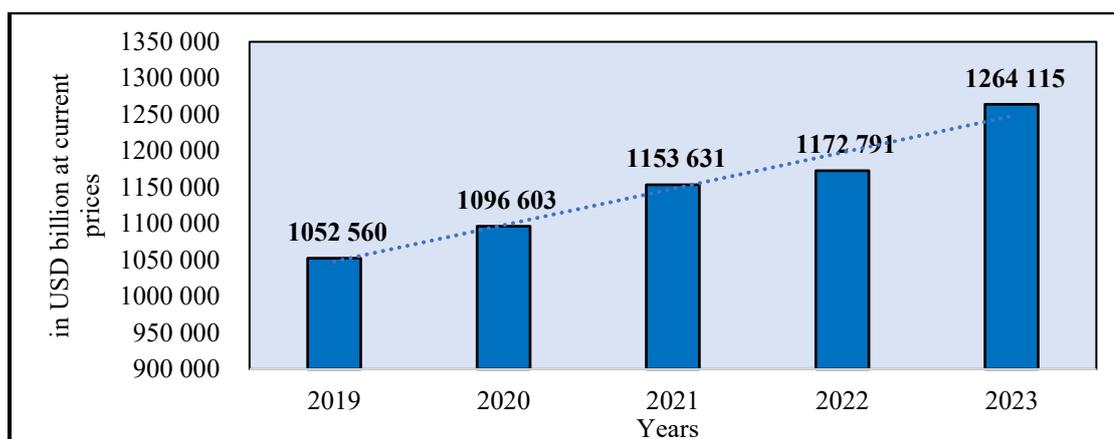


Fig. 3. Defence spending development trend in NATO member countries in 2019–2023 (in USD billion at current prices) Source: [23]

Research results [27] confirmed through macroeconomic analysis that the governments of most Alliance member countries, satisfied with a long-term period of peace, decided not to fulfil their obligations and allocate resources for other purposes. They took the position of free rider. They left the burden of financing the coalition defence mainly to the USA. In 2011, 2013, 2014, only Great Britain and the USA fulfilled their obligations. In 2012 only the US and in 2015 the US, Great Britain and Poland. As the only relatively new member of NATO and the only country of the former Warsaw Pact, Poland promoted the country’s defence as its priority and kept its commitments. The level of spending in 2011 was surpassed only in 2020. The long-term trend of non-fulfilment of the commitment naturally manifested itself in the deepening of the differences between the amount of military spending of the US and European countries. This trend led to the halting of the modernization and construction of the armed forces of the parasitic states and to their moral and technological retardation.

An example can be the situation in the underfunding of the modernization and development of the Army of the Czech Republic. The volume of the budget of the Ministry of Defence has been steadily decreasing since 2005 (2% of GDP) to the level of 0.96% to 0.97% of GDP in 2014 and 2016. Since 2017, there has been a gradual increase in resources. In 2023, the defence financing law was adopted, which is to guarantee the government’s obligation to set aside at least 2% of the nominal gross domestic product for defence financing expenses every year in the draft law on the state budget. Approaching the threshold level of 2% of GDP should be achieved in 2024. The budget of the Ministry of Defence of the Slovak Republic in 2014 amounted to 0.98% of GDP, between 2015 and 2022 it ranged from 1.1% to 1.8% GDP.

An economic analysis of defence spending has shown that the governments of both countries have been parasitizing coalition defence for a long time. In this way, the governments of both countries inefficiently and purposefully allocated resources that should have been invested in their own and coalition defence from a macroeconomic point of view. The above research has confirmed the inefficiency and uneconomical allocation of defence spending. Macroeconomic analysis cannot provide information regarding the analysis of financing and management of funds intended for the defence of one’s own country and the Alliance. Other methods of economic analysis are used to determine the so-called operational efficiency and economy of expenses. These include, for example, the analysis of budget expenditures, including the fulfilment of state budget indicators, or especially the budget chapters of the Department of Defence. It provides us with information about what funds were used for the acquisition of property (acquisition), works and services, personal expenses of professional soldiers and civilian and civil employees and for what purposes (goals), and what funds were not used for planned needs. These analyses are presented by the Ministry, for example, as part of the State Final Account and are publicly available. Among the most reliable analytical sources on the operational efficiency of defence spending are the records of audit conclusions from the audits of the Supreme Audit Office. Unfortunately, these conclusions analyse only selected spending areas of the Department of Defence. No other comprehensive assessment of defence spending activities is publicly available. Even from these partial analytical procedures, it follows that the reduced defence expenditures of the past years were not always used efficiently and economically.

The allocation inefficiency caused by freeriders i.e. states that did not comply with agreed obligations, also contributed to the operational inefficiency of the defence department. The lack of resources for the modernization of the armed forces has caused an internal debt during the last twenty years (inventories, restrictions on the repair, maintenance and functionality of military equipment, weapons systems, and training. Increasing defence spending increases the demand for military equipment and technology, weapons and weapon systems. This will be reflected in the lack of purchased items and the increase in their price. The trend of increasing defence spending does not mean that the internal debt and obligations to defence will be resolved within one or two years. It follows from the available analyses that the increase in defence spending is currently not proportionate increasing the defence capability of the state or the Alliance. The black passenger factor is a

risk factor for the defence capability of the states and the Alliance, which was underestimated by the governments of the NATO countries. The policy of the long-term reduction of the military expenditures of the majority of the Alliance member countries and the parasitism of the collectively realized defence was a significant security threat for the individual states and the Alliance as a whole. The politicians of the parasitic states underestimated this situation.

#### 4. Conclusion

The current overall unfavourable development in the global and regional security environment in order to ensure collective alliance and own individual defence requires a more effective and efficient redistribution of resources and an increase in defence spending. Mutual relations between defence and the economy are constantly developing, deepening, and today they are much closer and more interconnected than ever before.

The above graphs (see Fig. 1–3) confirm that the improvement or deterioration of the global and regional security environment and the security situation, together with the decrease or growth of military and non-military threats, has an indisputably significant impact on the allocation of defence expenditures from the state budgets of individual countries and the level of ensuring their defence. Based on the examination of several available relevant information, facts and characteristics, it can be concluded that the feeling of threat and a more intense perception of security threats leads to an increase in investments in the maintenance and modernization of existing defence capacities and capabilities, and at the same time in building new ones corresponding to new threats and challenges. This fact subsequently leads to an increase in the defence budgets of individual countries.

On the other hand, most of the European allies, from the point of view of economic theory, continue to take the position of free rider and still rely on the fact that their bill will be paid by other members of the Alliance, which has become a high-risk factor for ensuring the defence of the states and the Alliance. The Russian threat, as well as other non-military asymmetric security threats, did have an effect and caused several NATO member states to undergo changes in their security and defence policies and to changes in their strategies and doctrines. For example, after twenty years, the Czech Republic succeeded in enforcing the law on defence financing and at the same time fulfilling the above-mentioned commitment of 2% of GDP for defence in 2024. The Slovak Republic fulfilled this commitment in 2023. However, the increase in defence spending does not guarantee their allocation or operational efficiency and economy. It also does not guarantee that the long-term internal debt will be saturated in the short term.

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