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NATO Members Spending Commitments and their Defense Burden: Analysis of their Fulfillment

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Abstract

Military expenditures represent an important component of government spending devoted to the provision of national defense as a core public good. Despite their importance, no universally accepted definition of military expenditure exists, as national governments and international organizations apply differing conceptual and methodological approaches. This paper examines the evolution of defense burden, measured as military expenditure as a share of gross domestic product across NATO member countries from 2010 to 2025, with particular attention to NATO spending commitments adopted at the Wales Summit in 2014, all within the context of the current defense spending commitment adopted during the Hague Summit in 2025. Using SIPRI military expenditure data, defense burden trends are analyzed in three periods: pre-2014, post-2014 and pre-2022, and post-2022 following the full-scale Russian invasion of Ukraine. The results reveal a long-term shift from declining defense burdens prior to 2014 toward a sustained increase across most NATO members after the Wales Summit, with a pronounced acceleration after 2022. While the NATO-wide average defense burden rose above 2% of GDP by 2025, significant disparities among member states persist. A detailed case study of the Czech Republic demonstrates a broadly similar but lagging trajectory, with defense spending consistently remaining below NATO average and median values and failing to reach the 2% GDP threshold by 2025. The findings underscore structural differences in burden sharing within NATO and highlight the relevance of past spending behavior for assessing the credibility of current and future defense commitments.

KEY WORDS: *military expenditure, defense burden, spending commitment, alliance, NATO, member state.*

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1. Introduction

Military expenditures represent a significant part of government spending aimed at providing the prue public goods of national defense. [1] Despite this fact, there is no single standard definition of what exactly military expenditures consist of. Generally, values that governments report as military expenditures are based on their (national) interpretations of the contents of this category of government spending are basically free to define military expenditure according to their own wish and purpose. Common issues connected with defining and measuring military expenditures result from functional versus institutional approaches to government responsibilities and therefore to defense as well, indirect and intangible costs of defense. [2] Different international organizations or research institutes formulated their own definition of military expenditures. One possible and rather simple approach defines military expenditure as the amount of financial resources allocated by a country to maintain its armed forces and other essential services for defense purposes. [3] NATO defines military expenditure (using the term "defense expenditure") as payments made by an Allied national government (excluding regional, local and municipal authorities) specifically to meet the needs of its own armed forces or those of other Allies or the needs of the Alliance as a whole. Their major component represents *payments for armed forces and other types of forces* if trained and equipped so that they can operate under direct military authority in deployed operations. According to NATO definition, military expenditures further include:

- retirement pensions,
- war reserves,
- expenditure for operations, missions, engagements,

- expenditure for peacekeeping and humanitarian operations, paid by ministries of defense or other ministries, the destruction of weapons, equipment and ammunition, and the costs associated with inspection and disarmaments control,
- defense research and development,
- military and financial assistance to a partner country,
- costs of mixed civilian-military activities, but only when the military component can be specifically accounted for or estimated (e.g. airfields, meteorological services, aids to navigation). [4]

Especially for the purposes of sharing of defense burden among members of security alliances but also for other international comparisons and purposes, the indicator the share of military economy in gross domestic product (GDP) is often used. [5] This indicator, expressing the burden of military expenses to given economy, automatically relates the amounts of military expenditures to economic performance and makes international comparisons easy for it does not need any transfers of values of different currencies or transfers of values in current prices to constant prices, reflecting inflation effects. [6]

In the context of a deteriorating security environment, primarily due to the ongoing war in Ukraine, NATO members have committed to increasing their military spending to 3.5% of GDP and allocating an additional 1.5% of GDP to broader security measures, such as critical infrastructure and cybersecurity. [7] For, this defense spending commitment distinguishes more broader defense and security - related spending focused on enhancing resilience of NATO member countries and the so-called core military expenditures what are directly linked to operation and development of military forces, e.g. military personnels expenses, military equipment and infrastructure. [8] This 2025 Hague NATO summit spending commitment is not the first commitment NATO members have made in the last decades although the previous commitments were related purely to core military expenditures. Last such spending commitment of NATO member countries was adopted during the Wales NATO summit in 2014 when – facing the Russian annexation of Crimea and the continuing war in the Southeast Ukraine – Alliance members who spent on their defense less than 2 % of national GDP committed themselves the gradually increase their military expenditures to the level of at least GDP 2% before the year 2025. In addition, NATO member countries declared that within their defense budgets, at least 20% of funds will be spent on military equipment [9]. Attitudes towards fulfilling these commitments differed considerably across individual NATO member countries as well as in the course of time. Understanding past attitudes of NATO members to their defense spending commitments, related factors and constraints represents a useful tool when monitoring fulfillment of the current commitment.

2. Research Methodology

The research presented in this paper represents a combination of quantitative and qualitative approach. To analyze behavior of NATO member countries with regards to their previous spending commitments, data on defense burden expressed as share of military expenditures in GDP, published by the Stockholm Peace Research Institute (SIPRI) in the SIPRI Military Expenditure Database, are used. [10] Therefore, all data on military expenditure used throughout this article are based on their definition by SIPRI, i.e. all current and capital expenditure on:

- the armed forces, including peacekeeping forces;
- defense ministries and other government agencies engaged in defense projects;
- paramilitary forces, when judged to be trained and equipped for military operations;
- military space activities.

This definition of military expenditure includes expenditures on personnel (salaries of military as well as civil personnel, retirement pensions of military personnel and social services for personnel), operations and maintenance, procurement, military research and development, military infrastructure spending and provided military aid. [11]

Using descriptive statistics, defense burden of NATO countries is examined in three periods of time:

- period prior to the 2014 NATO Wales Summit (years 2010-2014),
- period after the 2014 NATO Wales Summit commitment and before the full-scale Russian invasion to Ukraine (years 2015-2021), and
- period after the full-scale Russian invasion to Ukraine (years 2022-2025).

When analyzing trends in defense spending of NATO member countries in relation to their spending commitments, all current members of the Alliance were included except for Iceland which – as a country with no military – spends no military expenditures. Although not all the countries included in the analysis were members of NATO during all years of the analyzed periods, their inclusion provides a complex picture of spending behavior of all current member countries.

3. Defense Burden in NATO Member Countries before 2014 NATO Summit in Wales

Between the years 2010 and 2014, defense burden increased only in 4 NATO member countries, namely in Croatia, Estonia, Poland and Romania. Defense burden decreased in the 27 remaining NATO member countries. Therefore, the average defense burden of NATO member countries gradually sank from the initial level of GDP 1.60% in 2010 to GDP 1.40% in 2014.

The median value decreased as well from GDP 1.49% to GDP 1.25%. Lower median than average values indicate that the average values were influenced by a limited number of member countries with defense burden substantially higher compared to the NATO average values.

In this period, only four countries spent on their military more than 2% of their national GDP (and exceeded the same value for average of defense burdens in individual years of this period), namely USA, Greece, United Kingdom and Turkey. In all these four countries, defense burden followed a rather decreasing trend, in Turkey defense burden even fell below GDP 2% in the years 2013 and 2014. The average defense burden of the values for individual years in this period ranged between GDP 1.5% and GDP 2.0% in six countries (Croatia, Estonia, Poland, Finland, France and Portugal). In case of eight countries defense burden fell below GDP 1 % in any of the years of this period (Czechia, Hungary, Latvia, Lithuania, Slovakia, Slovenia, Belgium and Luxembourg). Only in two countries, the average defense burden remained below GDP 1.0% (Hungary and Luxembourg). The remaining seventeen countries reported average defense burden between GDP 1.0% and GDP 1.5%. For average values of individual NATO member countries and for NATO, see Figure 1. [10]

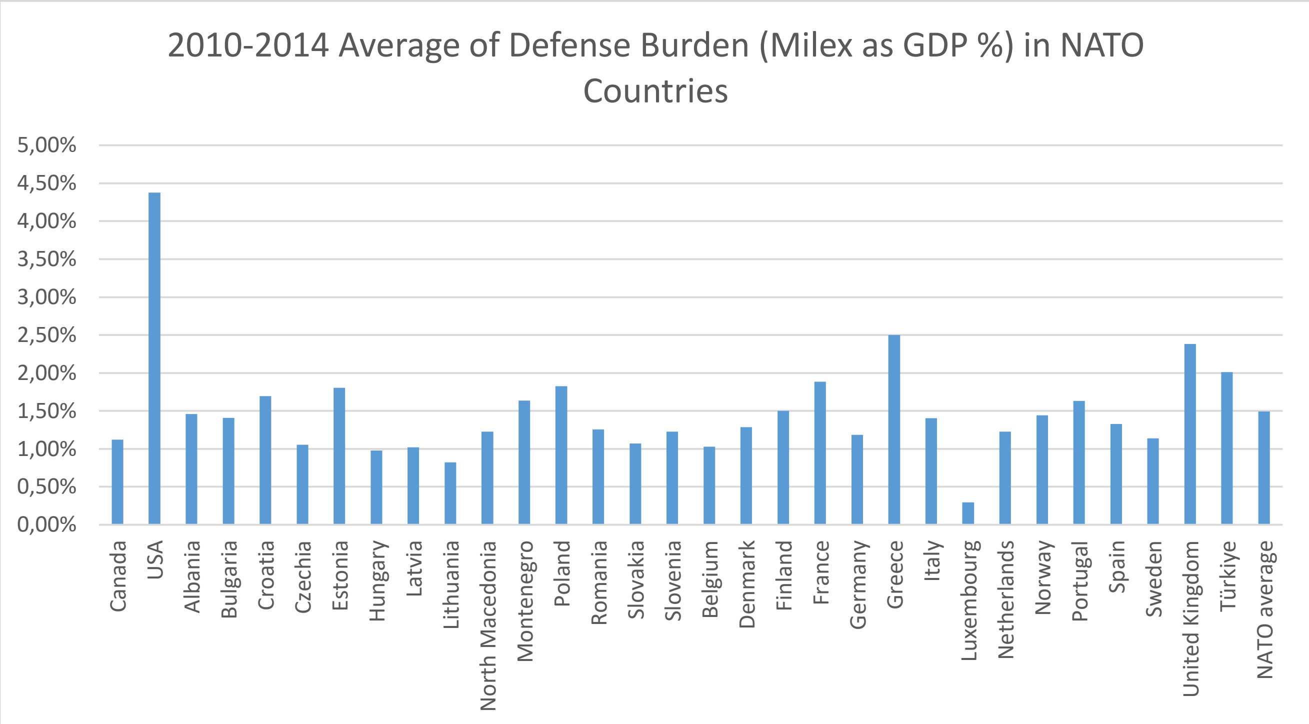

Fig. 1. 2010-2014 Average of Defense Burden (Milex as GDP %) in NATO Countries. (Source: SIPRI)

4. Defense Burden in NATO Member Countries after the 2014 NATO Wales Summit Commitment and before the Full-Scale Russian Invasion to Ukraine

After the NATO summit in Wales those of Alliance member countries, which spent on their defense less than GDP 2% (all except for USA, Greece and United Kingdom) entered a decade when they were supposed to gradually enhance their military expenditure at least to this threshold value. Let us examine tendencies of NATO member countries in a part of this decade – prior to the full-scale Russian invasion to Ukraine, i.e. before 2022. This period represents 70% of the time available for implementation and fulfillment of the 2014 NATO Wales Summit spending commitment.

During the period of 2015 through 2021, the average defense burden of NATO member countries increased from the level of GDP 1.41% to GDP 1.67%. However, the average defense burden decreased between 2020 and 2021 by GDP 0,05%. This year-on-year decrease could be caused by fiscal consequences of previous Covid-19 pandemic. The median value of defense burden also increased from GDP 1.21% in 2015 to GDP 1.54% in 2021.

Between 2015 and 2021, defense burden increased in all NATO member countries except for Turkey where the 2021 value of defense equals the 2015 value, and except for USA, Portugal and Finland[2], where defense burden decreased. Compared to the 2010-2014 period, this indicates a significant change with vast majority of countries following a trend of increasing their defense burden. Six member countries (USA, Estonia, Poland, Greece, United Kingdom and Turkey) achieved an average value of defense burden of the seven years at or above the level of GDP 2%. Additional seven member countries average defense burden ranged above GDP 1.5% and bellow GDP 2.0% (Bulgaria, Croatia, Latvia, Lithuania, Romania, France and Norway).

[2] Note: Finland was not NATO member between 2015 and 2021 and therefore, was not bound by the 2014 NATO Wales summit spending commitment.

Only two NATO member countries spent on their military on average less than GDP 1% (Belgium and Luxembourg). The average defense burden of remaining sixteen NATO member countries stayed above GDP 1% but below GDP 1.5% (see Figure 2). [10]

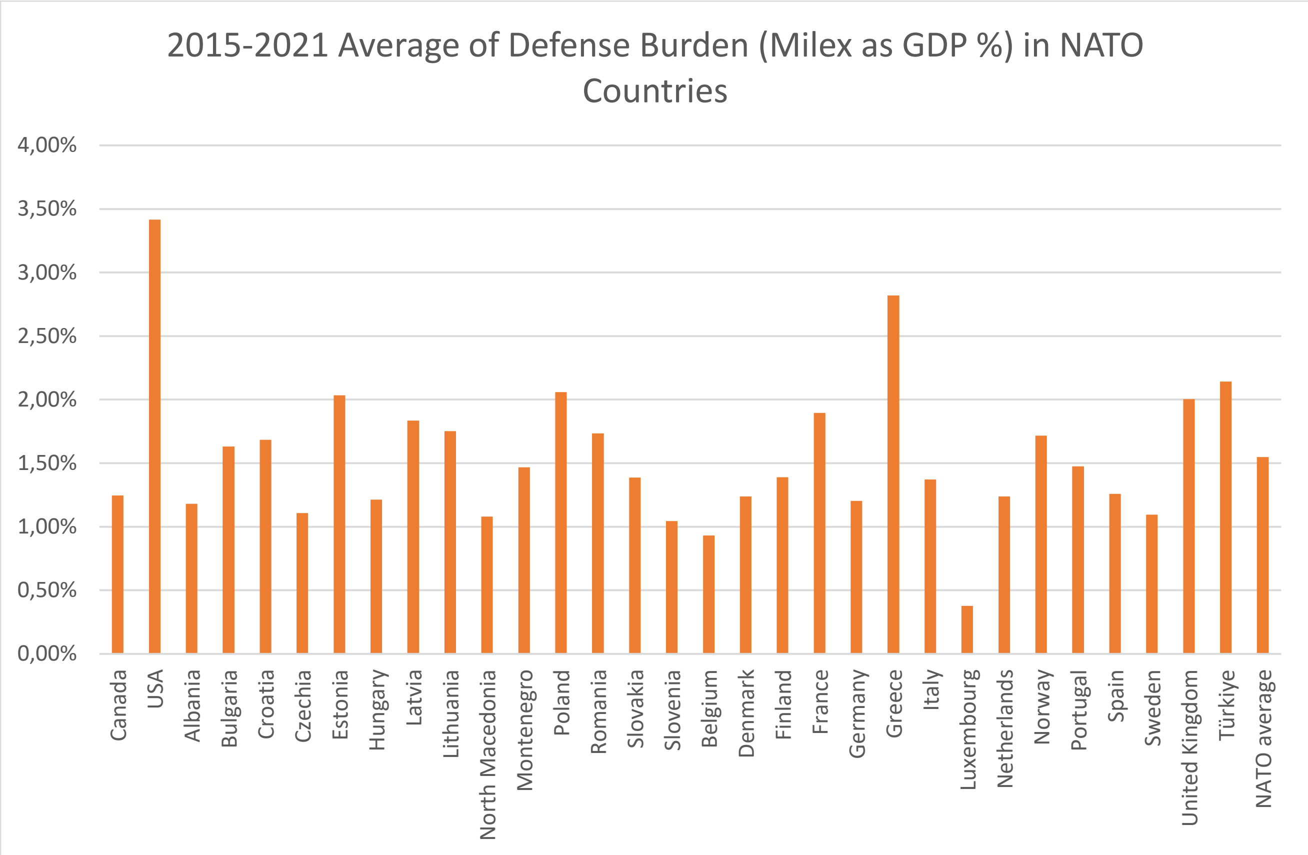

Fig. 2. 2015-2021 Average of Defense Burden (Milex as GDP %) in NATO Countries. (Source: SIPRI).

In 2021, twenty-two NATO member countries spent more than GDP 2% on their defense and additional five NATO member countries reported their defense burden between GDP 1.8% and GDP 2%. [10]

5. Defense Burden in NATO Member Countries between 2022 and 2025

In February 2022, the full-scale invasion of Russian Federation in Ukraine marked another turning point in the perception of the security situation in Europe. Therefore, the last period of our analysis covers years 2022 through 2025. The years 2022 and 2023 represent also the last two years when NATO members countries were expected to fulfill their 2014 spending commitment. In the year 2025, NATO members agreed that military expenditure representing GDP 2% will not be sufficient to meet challenges of evolving security threats and that military expenditures should reach the level of at least GDP 3.5%. [7]

On average, the 2022-2025 defense burden of all NATO member countries reached GDP 2.01%. During this period, defense burden grew in 29 NATO member countries. The average defense burden increased from GDP 1.72% in 2022 to GDP 2.35% in 2025. Similarly, the median defense burden value increased from GDP 1.59% to GDP 2.08%. The 2022-2025 average defense burden exceeded GDP 2% in eleven countries (USA, Estonia, Hungary, Latvia, Lithuania, Poland, Denmark, Finland, Greece, Norway, United Kingdom). In five NATO member countries, the 2022-2025 average defense burden stayed below GDP 1.5% (Canada, Slovenia, Belgium, Luxembourg and Portugal). In remaining fifteen NATO member countries, the average defense burden ranged above GDP 1.5% and below GDP 2.0% (see Figure 3). [10]

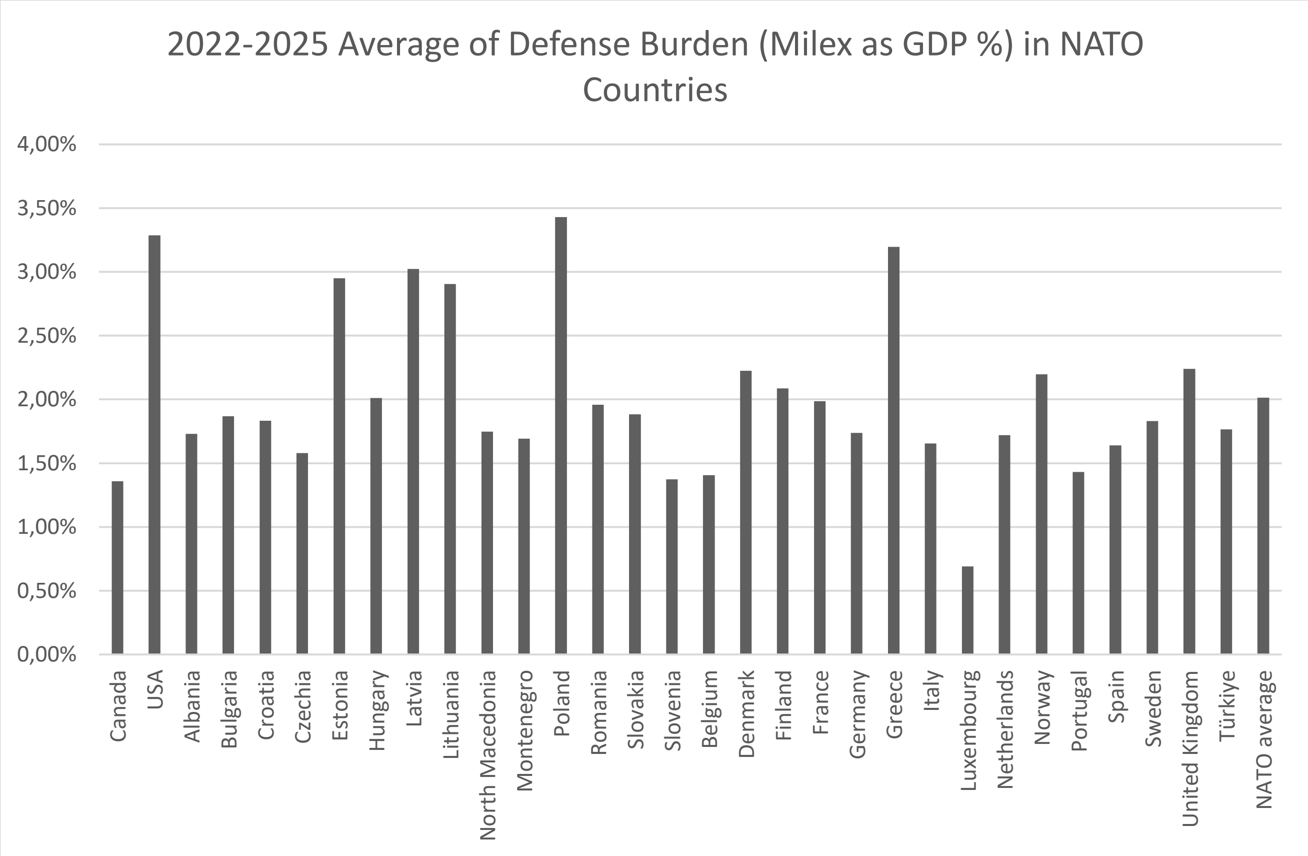

Fig. 3. 2022-2025 Average of Defense Burden (Milex as GDP %) in NATO Countries. (Source: SIPRI).

In 2024 – as the tenth year of the ten-years term for 2014 spending commitment fulfillment – just eleven NATO member countries´ military expenditures achieved or exceeded GDP 2% (USA, Estonia, Hungary, Latvia, Lithuania, Poland, Denmark, France, Greece, Norway and United Kingdom). In 2025 – the last year with available ex post data – it was already 22 NATO member countries which defense burden exceeded GDP 2% (USA, Albania, Bulgaria, Croatia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Belgium, Denmark, Finland, France, Germany, Greece, Netherlands, Norway, Spain, Sweden and United Kingdom). [10]

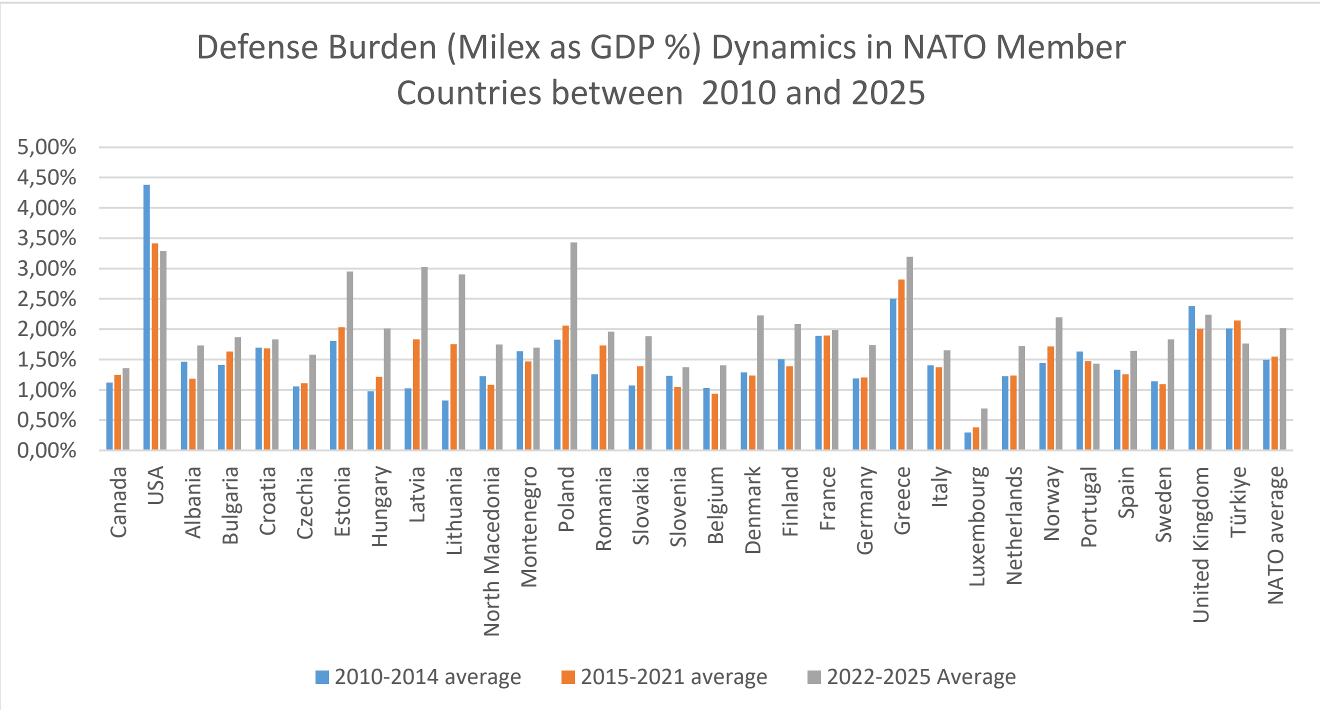

Fig. 4. 2010-2025 Average Defense Burden (Milex as GDP %) Dynamics in NATO Countries. (Source: SIPRI).

As it indicates Figure 4, between 2010 and 2025 defense burden in NATO member countries dramatically changed. On average, within the Alliance it increased by app. GDP 0.75% to GDP 2.35%. Growth in national defense burden exceeding GDP 0.5% is evident in eighteen NATO member countries (Czechia, Estonia, Hungary, Latvia, Lithuania, North Macedonia, Poland, Romania, Slovakia, Belgium, Denmark, Finland, Germany, Luxembourg, Netherlands, Norway, Spain and Sweden). On the contrary, between 2010 and 2025, defense burden decreased only in four NATO member countries, namely in USA (by GDP 1.79% to the level GDP 3.12% in 2025), Slovenia, United Kingdom and Turkey. [10]

6. Defense Burden in the Czech Republic

As the Figure 5 shows, between 2010 and 2014, the share of Czech military expenditure in GDP followed a decreasing trend falling below the GDP 1% threshold in 2014. Following the 2014 NATO summit in Wales, we can see an end of the decreasing trend, replaced by a rather unchanged levels of defense burden in 2014 through 2017. The following 4 years, Czech defense burden gradually increased to the level of GDP 1.35 % in 2021. The years 2022 and 2023 report lower levels of defense burden of GDP 1.29% and GDP 1.31% respectively. The year 2024 was connected with the highest year-on-year increase in Czech defense burden by 0.57%, resulting in 2024 Czech military expenditures representing GDP 1.88%. So, the Czech defense burden remained below the GDP 2% threshold resulting from the 2014 spending commitment. Moreover, the 2025 defense burden dropped again to the level of GDP 1.84%. [10]

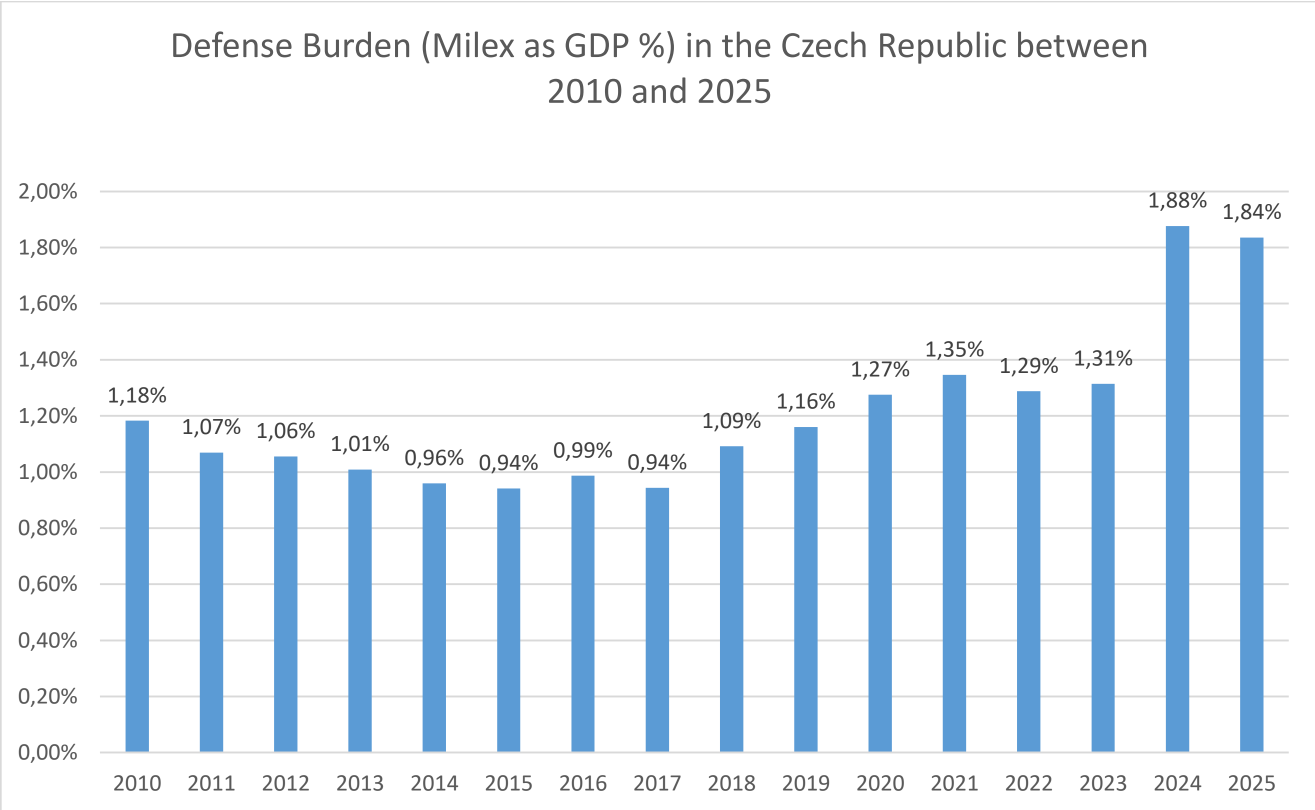

Fig. 5. Defense Burden (Milex as GDP %) in the Czech Republic between 2010 and 2025. (Source: SIPRI).

As Figure 6 demonstrates, between 2010 and 2025, the Czech Republic defense burden evolved in a rather similar way like average and median values of defense burden of all NATO member countries. Initial six years of the examined period meant decreasing trends both for Czech and NATO average/median values of defense burden. Shift to increasing trend began in the Czech defense burden in 2018, i.e. two years later than its NATO average/median values. NATO defense burden then continued in constant growing trend except for the year 2021, which meant a year-on-year decrease in both average and median values. Czech defense burden year-on-year changes were positive only in the years 2019, 2020, 2021, 2023 and 2024. On the contrary, years 2022 and 2025 were connected with negative year-on-year changes (decreases) of Czech defense burden. [10]

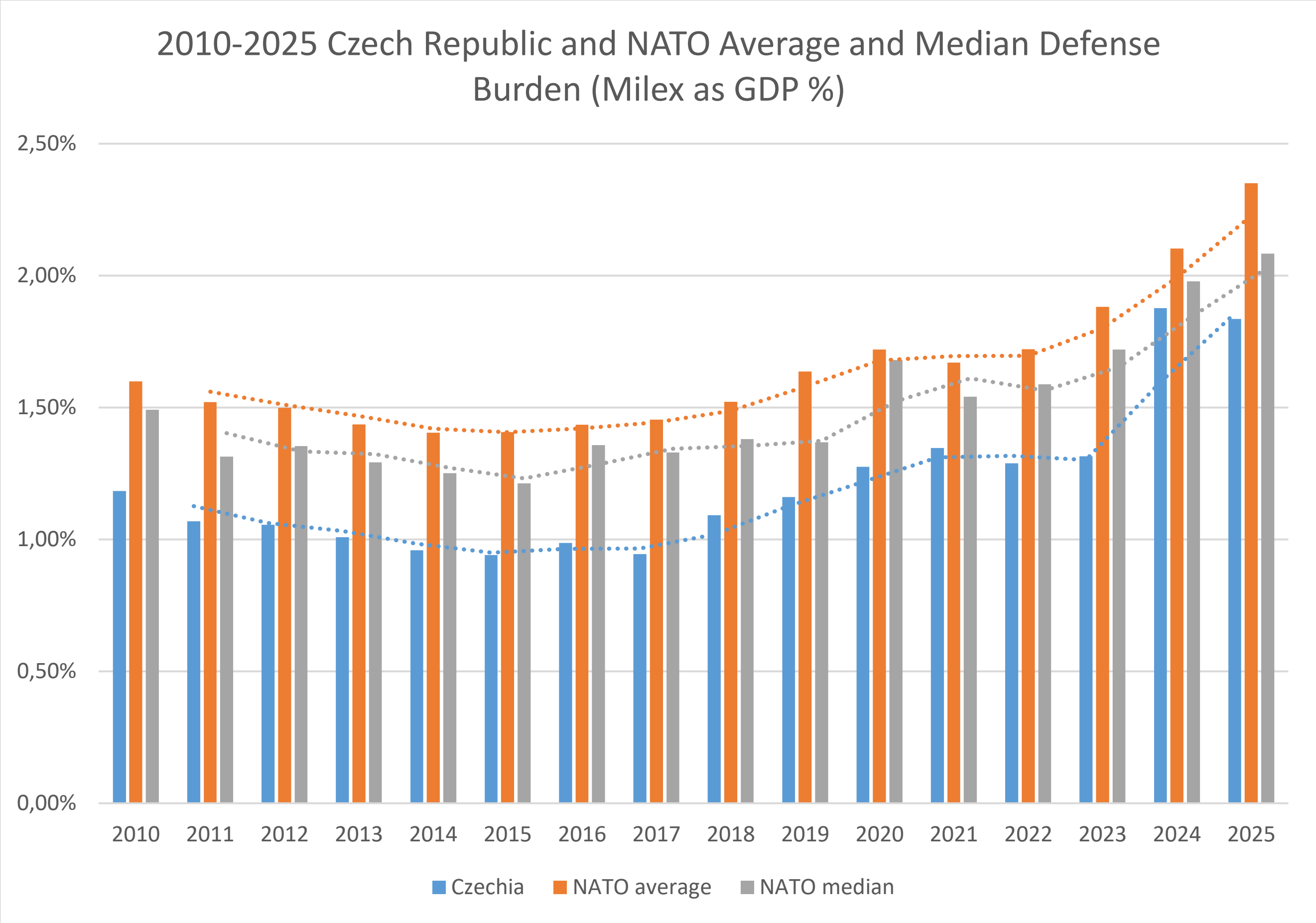

Fig. 6. Czech Republic and NATO Average and Median Defense Burden (Milex as GDP %) between 2010 and 2025. (Source: SIPRI).

At the beginning of the examined period in 2010, the Czech Republic spent the sixth lowest share of its GDP on defense among the NATO member states; in 2025, the Czech defense burden was the fifth lowest in NATO. In 2010, the Czech Republic spent on its military 1.18% of its GDP, which was GDP 0,52% lower than the NATO average defense burden and GDP 0.31% lower than median value of NATO defense burden. At the end of the examined period in 2025, the Czech military expenditures represented 1.84% of national GDP, which was GDP 0.51% less than the NATO average and GDP 0.24% less than the median value of defense burden of NATO member countries. So, over the past 16 years, the Czech Republic's defense spending has remained, to a comparable extent, below the Alliance average and the Czech Republic remained in the group of six Alliance members with the lowest defense burden.

7. Conclusions

This paper examined the evolution of defense burden in NATO member countries between 2010 and 2025, with particular emphasis on spending commitments adopted at the NATO summit in Wales (2014) and with reflection of the current spending commitment adopted at the NATO Hague summit (2025). Using SIPRI data and descriptive statistical methods, the analysis demonstrated that defense spending patterns within the Alliance have undergone a profound transformation over the examined period, shaped primarily by changes in the security environment and evolving political commitments.

The findings show that prior to the 2014 Wales Summit, defense burden across NATO countries generally declined, reflecting a prolonged period of relative security complacency and fiscal restraint. In this period, only a small number of member states increased their defense spending, while the majority reduced it, resulting in a decreasing NATO-wide average and median defense burden. This situation changed markedly after 2014, when NATO members formally committed to increasing military expenditures toward the benchmark of 2% of GDP. Although progress during the 2015–2021 period was gradual and uneven, the overall trend shifted clearly toward increasing defense burden, indicating a partial but growing responsiveness to Alliance commitments.

The full-scale Russian invasion of Ukraine in 2022 represented a decisive turning point. Between 2022 and 2025, defense spending accelerated across most NATO member countries, pushing the Alliance-wide average defense burden above the 2% threshold for the first time in the observed period. Nevertheless, despite this significant increase, substantial differences among individual member states persisted. While a growing number of countries met or exceeded the 2%

benchmark by 2025, several members continued to lag behind, highlighting enduring asymmetries in burden sharing within the Alliance.

The case of the Czech Republic illustrates these broader patterns while also revealing specific national characteristics. Czech defense spending followed a trajectory broadly similar to NATO averages, with declining expenditures before 2014, stagnation in the immediate post-Wales period, and growth after 2018. However, this growth occurred later and at a slower pace than the NATO average, resulting in the Czech Republic remaining among the group of NATO members with the lowest defense burden throughout the entire period. Despite a sharp increase in 2024, the Czech Republic did not reach the 2% GDP threshold by 2025 and continued to spend below both the NATO average and median.

Overall, the results confirm that NATO defense spending commitments have had a measurable impact on member states' behavior, especially under conditions of deteriorating international security situation. At the same time, the persistent disparities in defense burden suggest that political, economic, and institutional constraints continue to shape national responses to collective commitments. Understanding these long-term spending patterns and national trajectories is essential for assessing the credibility and feasibility of NATO's current ambition to increase military expenditures beyond traditional benchmarks and to expand defense spending into broader security and resilience domains.

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