

Eastern Flank of NATO – Analysis of the Eastern Flank on NATO Countries' Military Expenditure¹

Ing. Juraj Sýkora¹

¹University of Economics in Bratislava, Faculty of International Relations,
Dolnozemska cesta 1/b, Bratislava, 852 35

juraj.sykora@euba.sk

<https://doi.org/10.53465/EDAMBA.2023.9788022551274.272-281>

Abstract. The Eastern Flank of NATO countries – Latvia, Lithuania, Estonia, Poland, Slovakia, Hungary, Bulgaria, and Romania – are all situated in the neighbourhood of Ukraine and Russia. That is the reason why their security importance for the whole Alliance is increasing in the context of the war in Ukraine. However, there is the question of how the Russian invasion to Ukraine can impact the military expenditure of the mentioned countries. Nonetheless, to answer such a question, there needs to be empirical proof that the Eastern Flank of NATO countries' military spending correlates together. The aim of this article is to examine the relationship between the military spending of Eastern Flank of NATO countries and assess how the Russian invasions of Chechnya, Georgia, and Crimea have affected their military expenditures.

Keywords: Eastern Flank, Military Expenditure, Russia.

JEL classification: F50, H50

¹ The article is a part of the project VEGA 1/0842/21 „Vývoj kooperatívnej bezpečnosti a pozícia Slovenskej republiky“.

1 Literature review

NATO's Eastern Front is becoming increasingly important in the context of the war in Ukraine. However, the Eastern Flank of NATO countries, which forms the buffer zone between the Alliance and Russia, made up of Bulgaria, Estonia, Hungary, Lithuania, Latvia, Romania, Poland and Slovakia, has been the focus of NATO's attention for several years. In order to enhance the Alliance's security, the NATO forward presence concept² was introduced in Estonia, Lithuania, Latvia, and Poland in 2017, and subsequently in Bulgaria, Hungary, Romania and Slovakia after the invasion of Ukraine. The author focuses on the Eastern Flank of NATO countries mainly through their institutionalized cooperation in the Bucharest 9 (B9) minilateral format. Even though the member of the format is also the Czech Republic, it is not further examined since the Czech Republic is not defined as the Eastern Flank of NATO country. Agnieszka Orzelska-Staczek from the Polish Academy of Sciences defines the mission of this group is to strengthen transatlantic security by reinforcing NATO's eastern front. She argues that the B9 states are committed to investing more in their defence, building mutual cohesion, and increasing the credibility of common defence, hence, becoming security givers and not security takers (Orzelska-Staczek, 2020). Whereas this commitment agrees with the official statements of the B9 group (NATO, 2023), there is a lack of research in the assessment of the real cohesion, cooperation, and military expenditure between the countries. However, this aspect is significantly important, since the countries are creating the border of the Alliance and in the case of conflict, they will be the first protectors of NATO. Alexander Lanoszka from the University of Waterloo is also sceptical about the commitment of NATO's most powerful members to protect the territory of the other members of the Alliance (Lanoszka, 2023). There is no tangible evidence that Article 5 should not be activated in the case of invasion. Multinational battlegroups can be proof of the unity and integrity of NATO members.

Furthermore, the question of cohesion is linked also to the military spending patterns of the observed countries. According to the data from the Stockholm International Peace Research Institute, the Invasion of Russia to Ukraine increased the military expenditure of Europe by 13%. Thus the the invasion influenced the military expenditure of Europe in a way it hasn't in the last 30 years (SIPRI, 2023). Nan Tian argues that the recent trend in military expenditure is the consequence of Russian actions which serve as an incentive for countries to enhance their defence capabilities and deterrence. In the example of Finland and Lithuania, Tian proves that the geographical proximity to Russia positively influenced their military spending, between the years 2013-2022 (Tian, 2023). Whereas Tian concentrates mainly on Finland and Lithuania, Cavendish goes further and argues that the Russian invasion has a positive effect on many more European countries' military spending plans, since they already announced that they will meet or exceed the NATO targets years between they planned to do so (Cavendish, 2023). Astrov from the Vienna Institute for International Economic Studies confirms the positive effect of the Russian aggression on EU countries' military spending and adds, that EU countries will become much more

² NATO forward presence concept includes the Eastern Flank of NATO countries.

important members of NATO than ever before (Astrov, 2023). Whereas authors in their research address the relationship between Russian invasions and military spending, they focus mainly on the recent invasion to Ukraine, omitting other Russian invasions that could have had an impact on military spending. Furthermore, the current state of the art overlooks the impact of the invasions on the Eastern Flank of NATO as a whole, rather it examines selected countries from the group separately, which makes it unfeasible to find synchronous defence spending patterns between Eastern Flank of NATO countries. In conclusion, academic research is omitting the question of the Eastern flank of NATO countries' reactions to the Russian invasions abroad through the unified effort to increase military expenditure.

2 Methodology

Hence, this article aims to determine whether the Eastern Flank of NATO countries have invested in defence synchronously by examining the correlation in their military expenditures over the past 28 years. Additionally, it aims to analyze how the military expenditure of the Eastern Flank of NATO countries has been affected by Russian invasions in other countries.

To fulfil the goals, we suggested three hypotheses. Firstly, we assume that the military spending of the Eastern Flank of NATO countries is synchronous and coordinated, thus they assess the regional security situation identically. Secondly, if the correlation between the countries' military spending is significant, we examined the collective military spending of the Eastern Flank of NATO countries and analyzed the impact of chosen Russian invasions on the country's military spending. Thirdly, there is a correlation between the time and military spending of the countries, hence if the military expenditure increases over time. The article is divided into 3 parts.

The first one is examining the Eastern Flank of NATO countries' military expenditure over the last 28 years. This period was chosen in order to analyze the military spending of the countries from the Russian invasion of Chechnya, Georgia and the annexation of Crimea. Whereas the current invasion of Ukraine is included, there is no intention to analyze its impact on the country's military spending due to the abstention of recent data. Rather it is the goal to foresee the behaviour of the NATO Eastern Flank countries, thus if their military spending will be static or will increase. To define the correlation the IBM SPSS software was used. Due to the length capacity of the article, the author illustrates only the results of quantitative research rather than the whole dataset.

The second part is dedicated to the analysis of the impact of Russian invasions on the military spending of the Eastern Flank of NATO countries. We chose 4 Russian invasions from 1995 to 2022, which could have influenced the countries' military expenditure. Chosen invasions are the invasion to Chechnya, the invasion to Georgia, the annexation of Crimea, invasion of Ukraine. To answer the research question, we calculated the average military expenditure of the countries over the observing period and examined the impact of the Russian invasions on the country's military investment behaviour. Parallel to the quantitative analysis we also performed the qualitative

analysis to compare the data with the topic's coverage of academic and research organizations.

The third part aims to conclude the article by summarising the main findings and providing predictions for the military expenditure behaviour of the Eastern Flank of NATO countries. In the article we used the dataset from the SIPRI military expenditure data (SIPRI, 2023), relevant internet sources and academic and research articles published in SCOPUS and Web of Science.

3 Correlation of the Eastern Flank of NATO countries' military expenditure

As can be observed in Table 1, there is a strong correlation between the defence military expenditure of the Eastern Flank of NATO countries during the observed period. Correlation is very significant at the 0.01 level in the majority of the country's combinations, whereas there are a few cases when the correlation is significant at the 0,05 level. Thus, almost all the correlation of all countries' military expenditure is significant, at least on the 0,05 level. The correlation table proves, that the country's military investment behaviour during the years is not random, rather it can be influenced by the perception of the threat from abroad or by the coordination with each other. The collected data show also other interesting phenomena. The highest correlation can be observed among the Baltic states' countries. Latvian, Estonian and Lithuanian military investments during the observing period show a significant level of cooperation, from 0.883 between Estonia and Latvia to 0.918 between Latvia and Lithuania. Such a high correlation cannot be seen in the military expenditure of chosen V4 countries, where the correlation was fluctuating between 0.378 and 0.673.

Table 1. Correlation of military expenditure of the Eastern Flank of NATO countries over the observing period 1995-2022. Source: SIPRI, 2023.

		Bulgaria	Estonia	Hungary	Latvia	Lithuania	Poland	Romania	Slovakia	Observing period
Bulgaria	Pearson Correlation	1	,416*	,621**	,607**	,576**	,408*	,568**	,533**	0,342
	Sig. (2-tailed)		0,028	0,000	0,001	0,001	0,031	0,002	0,003	0,075
	N	28	28	28	28	28	28	28	28	28
Estonia	Pearson Correlation	,416*	1	,606**	,883**	,886**	,946**	,805**	0,223	,984**
	Sig. (2-tailed)	0,028		0,001	0,000	0,000	0,000	0,000	0,254	0,000
	N	28	28	28	28	28	28	28	28	28
Hungary	Pearson Correlation	,621**	,606**	1	,768**	,809**	,673**	,795**	,644**	,522**
	Sig. (2-tailed)	0,000	0,001		0,000	0,000	0,000	0,000	0,000	0,004
	N	28	28	28	28	28	28	28	28	28
Latvia	Pearson Correlation	,607**	,883**	,768**	1	,918**	,848**	,842**	,446*	,820**
	Sig. (2-tailed)	0,001	0,000	0,000		0,000	0,000	0,000	0,017	0,000
	N	28	28	28	28	28	28	28	28	28
Lithuania	Pearson Correlation	,576**	,886**	,809**	,918**	1	,940**	,945**	,485**	,844**
	Sig. (2-tailed)	0,001	0,000	0,000	0,000		0,000	0,000	0,009	0,000
	N	28	28	28	28	28	28	28	28	28
Poland	Pearson Correlation	,408*	,946**	,673**	,848**	,940**	1	,889**	,378*	,939**
	Sig. (2-tailed)	0,031	0,000	0,000	0,000	0,000		0,000	0,047	0,000
	N	28	28	28	28	28	28	28	28	28
Romania	Pearson Correlation	,568**	,805**	,795**	,842**	,945**	,889**	1	,641**	,755**
	Sig. (2-tailed)	0,002	0,000	0,000	0,000	0,000	0,000		0,000	0,000
	N	28	28	28	28	28	28	28	28	28
Slovakia	Pearson Correlation	,533**	0,223	,644**	,446*	,485**	,378*	,641**	1	0,132
	Sig. (2-tailed)	0,003	0,254	0,000	0,017	0,009	0,047	0,000		0,503
	N	28	28	28	28	28	28	28	28	28
Observing period	Pearson Correlation	0,342	,984**	,522**	,820**	,844**	,939**	,755**	0,132	1
	Sig. (2-tailed)	0,075	0,000	0,004	0,000	0,000	0,000	0,000	0,503	
	N	28	28	28	28	28	28	28	28	28

*. Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

This phenomenon can be explained by the Polish efforts to build one of the strongest and most important armies in Europe (Politico, 2022). Thus, it can be stated, that the correlation doesn't have to be linked with the affiliation of the countries in the B9 unilateral group. On the contrary, it can be affiliated with historical experiences and the perception of threat, as in the case of Baltic countries.

According to data, Baltic countries share historical aspects and perception of threat with Poland, since their correlation fluctuates between 0.848 and 0.946. These countries have a similar attitude towards Russia and, on the contrary, Russia makes a claim on their territories (Reuters, 2023; Stars and Stripes, 2023). Thus, according to data, the Baltic states and Poland share the perception of threat and have similar military investment behaviour, about which we will elaborate in the next part of the publication.

The correlation model also shows that the lowest correlation is between Slovakia and Estonia, where the correlation is not even significant. The reason for this phenomenon can be the stagnating military spending of the Slovak Republic. The share of military expenditure in the GDP of the Slovak Republic was fluctuating between 1.25% to 1.70% during the whole observing period, whereas the Estonian share of military expenditure in the GDP was continuously rising (SIPRI, 2023).

This finding leads us to the second phenomenon of the correlation model, which is the correlation between military expenditure and the progress of time. The hypothesis set for this article was, that the Eastern Flank of NATO countries' investments are increasing over the observing period. Nonetheless, this hypothesis was only partially

confirmed. Whereas the majority of countries show a significant correlation, there are some exceptions that did not increase their military expenditure over the observed period. The lowest correlation can be indicated in the case of the Slovak Republic, where the correlation is not significant. This phenomenon can also be confirmed by previous warnings by NATO, which recommended increasing the quantity and quality of Slovak armed forces. Nevertheless, this trend can be related to domestic policy motivations rather than to the geopolitical aspects since the new government led by Prime Minister Eduard Heger increased the military expenditure with the aim to be more resilient towards the threats from Russia (Teraz 2018; Teraz 2022). The second lowest correlation between military spending and the observed time period can be indicated in the case of Bulgaria. However, the rest of the countries show a significant correlation, whereas the highest is observed in the case of Estonia and Poland.

According to the findings it can be stated, that the country's military expenditure over the observing period is not random, but rather influenced by the same stimulus.

4 Analysis of NATO Eastern Flank countries' military expenditure

As could be observed in the previous section, the military spending of the Eastern Flank of NATO countries significantly correlates with each other. This fact opens the next question, hence what influences the amount of the Eastern Flank of NATO countries' military spending.

When examining the data, an interesting phenomenon occurs. The first Russian invasion in the observed period occurred in 1999, sometimes referred to as Putin's first War (History on the Net, 2022). The Russian invasion of Chechnya could have been the reason for increased military spending, however, there are more possible explanations for this phenomenon. The year 1999 showed, that Russia does not hesitate to use its armed forces in the interventions abroad. However, the Eastern flank of NATO countries could have been even more concerned about the Russian massive military buildup that started in 2003. According to Susanne Oxenstierna from the Swedish Defense Research Agency, Russia increased its defence budget, and military strength, and set the foundations for further reform of the Armed Forces and for pursuing their geopolitical goals (Oxenstierna, 2016). This could have been the motivation for Eastern Flank of NATO to increase their security through higher investments in the military as can be seen in Figure 1. Motivation to do so could have been also influenced by the economic boom in all Eastern Flank of NATO countries, which they experienced between 2000-2007 (Worldbank, 2023).

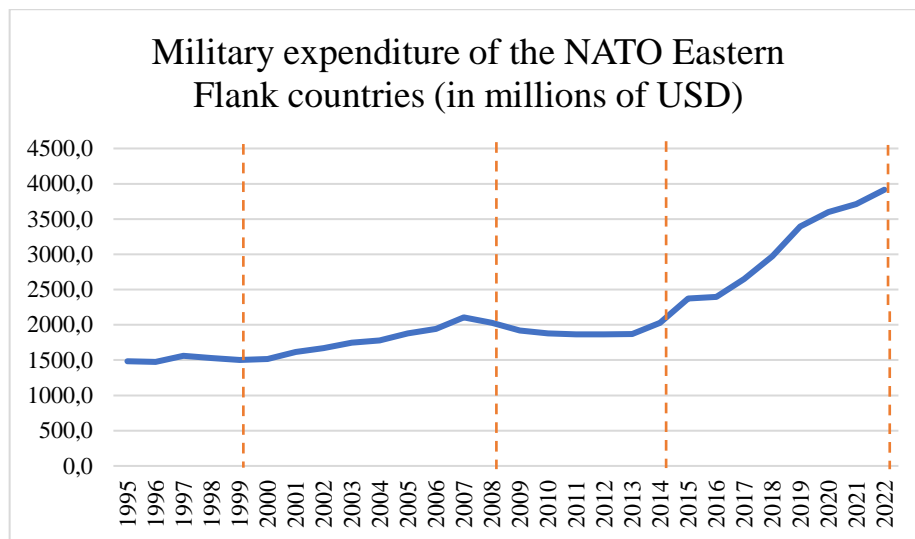


Fig. 1. Military expenditure of the Eastern Flank of NATO countries. Source: SIPRI MILEX

Whereas the war in Chechnya and the military buildup of Russia seem to have an impact on the Eastern Flank of NATO countries, the invasion of Georgia in 2008 did not affect military spending (Figure 1). On the contrary, we can observe a moderate decrease between 2008 and 2014. The Putin’s invasion was the proof, that Russia has the superpower ambitions and wants to control its sphere of influence (Oxenstierna, 2016). It is astonishing, that the Eastern Flank of NATO countries did not react to this invasion, since all of them are the target of Russia, which perceives them as the sphere of influence (NTI, 2021). NATO and the Western world are often criticized, that their reaction was weak and led to the Russian next invasions (Atlantic Council, 2021). The data in Figure one confirms these claims and shows, that the reaction of the Eastern Flank of NATO countries was not appropriate, even underestimating the Russian threat.

However, data show that the annexation of Crimea in 2014 was a significant impulse for the Eastern Flank of NATO countries to invest more in the military. Figure one shows, that the Russian invasion to Ukraine in 2014 boosted the country’s military expenditure, which has been continuously increasing since then. Although Stephen G. F. Hall from the University of Bath criticizes the Western reaction as weak and allowing the next Russian invasions (University of Bath, 2023). Esme Kirk-Wade, a researcher from the House of Commons Library, does not agree and argues, that the annexation of Crimea led to the confirming commitment to invest more into the military, which also the figure 1 confirms. Furthermore, the Eastern Flank of NATO countries was strengthened also by Allied forces by incorporating the NATO forward presence concept. Thus, it can be stated, that the Russian annexation of Crimea had an important impact on the Eastern Flank of NATO countries military expenditure. The motivation to increase military spending can have a root also in the concerns about the hybrid threats, which Russia activated after the annexation of Crimea (Lanoszka, 2023).

5 Conclusion

The last Russian invasion occurred on the 24th of February 2022, when Russia attacked Ukraine intending to overthrow Kyiv in a few days. This goal was not achieved, and the war is at the time of writing this article still ongoing. The reason why we did not analyze the data about the impact of the war in Ukraine in the previous section is, that it is too soon to assess its impact on the military expenditure of the Eastern Flank of NATO countries. However, in the article, we proved that there was a significant correlation between the military expenditure of the Eastern Flank of NATO countries over the last 28 years. Thanks to this finding we can assess that the countries perceive the threats from abroad, mainly from Russia, similarly. Furthermore, the quantitative analysis proved that almost all the Eastern Flank of NATO countries increased their military expenditure over time. On the basis of these findings, we could consequently examine which stimulus has an impact on the country's military expenditure. After the examination of the data, we can declare that the annexation of Crimea had the strongest impact on the military expenditure of the NATO Eastern Flank countries. After this event, military spending started continuously increasing and shortly after also the NATO multinational battlegroups were established, the first four in 2017 in Poland and Baltic states and the second four in Slovakia, Hungary, Romania, and Bulgaria after the Russian invasion to Ukraine in 2022. On the contrary, the Russian invasion to Georgia did not affect the countries' military expenditure. There is a strong reason to believe, that NATO and the Western world underestimated the invasion in Georgia and reacted only in symbolic ways, which opened the doors for Russia to try similar operations again. Due to various factors such as the Russian military buildup or economic boom, it is difficult to assess the impact of the Russian invasion to Chechnya impact on the countries' military spending. However, it can be declared that the Russian actions were the main motivation to strengthen their defences.

According to the mentioned findings, we can predict that the current invasion of Russia in Ukraine will have a positive effect on the country's military spending, as well as on the Eastern Flank of NATO countries' mutual cooperation.

References

1. Astrov, A., Ghodsi, M., Grievesson, R.: Russia's invasion of Ukraine: assessment of the humanitarian, economic, and financial impact in the short and medium term. *International Economics and Economic Policy* 19(3), 331–381 (2022).
2. The 2008 Russo-Georgian War: Putin's green light, <https://www.atlanticcouncil.org/blogs/ukrainealert/the-2008-russo-georgian-war-putins-green-light/>, last accessed 2023/08/20.
3. Invasion of Ukraine: Implications for European defense spending. <https://www.mckinsey.com/~media/mckinsey/industries/aerospace%20and%20defense/our%20insights/invasion%20of%20ukraine%20implications%20for%20european%20defense%20spending/invasion-of-ukraine-implications-for-european-defense-spending.pdf>, last accessed 2023/08/20.

4. Putin's First Invasion: The 1999 Invasion of Chechnya, <https://www.historyonthenet.com/putins-first-invasion-the-1999-invasion-of-chechnya>, last accessed 2023/08/20.
5. Defence spending pledges by NATO members since Russia invaded Ukraine, <https://commonslibrary.parliament.uk/defence-spending-pledges-by-nato-members-since-russia-invaded-ukraine/>, last accessed 2023/08/20.
6. Lanoszka, A., Hunzeker, M.: Evaluating the Enhanced Forward Presence After Five Years. *The RUSI Journal* 168(1-2), pp. 88–97 (2023).
7. Joint Declaration on Allied Solidarity and Shared Responsibility, <http://nato.mae.ro/en/local-news/904>, last accessed 2023/08/20.
8. Strengthening Russia's Influence in International Affairs, Part II: Russia and Its Neighbors: A Sphere of Influence or a Declining Relationship?, <https://www.nti.org/analysis/articles/strengthening-russias-influence-in-international-affairs-part-ii-russia-and-its-neighbors-a-sphere-of-influence-or-a-declining-relationship/>, last accessed 2023/08/20.
9. Orzelska-Stączek, A.: New wave of regional cooperation in Central Europe as a response to new threats. *Rocznik Instytutu Europy Środkowo-Wschodniej* 18, 79–97 (2020).
10. Oxenstierna, S.: Russia's defense spending and the economic decline. *Journal of Eurasian Studies* 7(1), 60–70 (2016).
11. Meet Europe's coming military superpower: Poland, <https://www.politico.eu/article/europe-military-superpower-poland-army/>, last accessed 2023/08/20.
12. Medvedev floats idea of pushing back Poland's borders <https://www.reuters.com/world/europe/russias-medvedev-floats-idea-pushing-back-polands-borders-2023-02-24/>, last accessed 2023/08/20.; Putin deputy claims Baltic nations as provinces, insults NATO amid Russian military setbacks in Ukraine, <https://www.stripes.com/theaters/europe/2023-05-18/medvedev-poland-baltics-nato-10155836.html>, last accessed 2023/08/20.
13. SIPRI Military Expenditure Database, <https://www.sipri.org/databases/milex>, last accessed 2023/08/20.
14. World military expenditure reaches new record high as European spending surges, <https://www.sipri.org/media/press-release/2023/world-military-expenditure-reaches-new-record-high-european-spending-surges>, last accessed 2023/08/20.
15. NATO je v hodnotiacej správe kritické k ozbrojeným silám SR, <https://www.teraz.sk/slovensko/nato-je-v-hodnotiacej-spravekriticke/342026-clanok.html>, last accessed 2023/08/20.
16. Na obranu má v roku 2023 ísť 2,45 miliardy, <https://www.teraz.sk/ekonomika/na-obranu-ma-v-roku-2023-ist-245-mil/667183-clanok.html>, last accessed 2023/08/20.
17. Tian, N., Lopes Da Silva, D., Béraud-Sudreau, L. Developments in Military Expenditure and the Effects of the War in Ukraine. *Defence and Peace Economics*, 34(5), 547–62 (2023).
18. Ukraine war: how the west's weak reaction to Crimea's referendum paved the way for a wider invasion, <https://blogs.bath.ac.uk/iprblog/2023/03/17/ukraine-war-how-the-wests-weak-reaction-to-crimeas-referendum-paved-the-way-for-a-wider-invasion/>, last accessed 2023/08/20.

19. GDP growth (annual %) - Estonia, Latvia, Slovak Republic, Lithuania, Hungary, Romania, Bulgaria, Poland,
<https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2021&locations=EE-LV-SK-LT-HU-RO-BG-PL&start=1981&view=chart>, last accessed 2023/08/20.