This article considers military security in the Eastern Baltic. The research focuses on the economic sustainability of Estonia, Latvia, and Lithuania in the context of military spending. The authors maintain that an increase in military spending can either strengthen or weaken national economic and technological potential. In Germany or Sweden, military spending accounts for a smaller proportion of the GDP or budget revenues, but it is integrated into the general model of innovative and technological development. In the case of the Baltics, it is advisable to estimate military spending as a proportion of budget revenues rather than that of GDP — this recommendation applies to all smaller states. The authors stress that the central component of any national military and economic development is a focus on general national objectives rather than solely military ones. Economically advanced countries integrate defence spending into their investment and innovation strategies and industrial policies. Smaller countries — and the Baltics are no exception — do not apply this principle. Their military spending does not contribute to the technological and economic agenda. The article shows that the military spending of Lithuania, Latvia and Estonia undermines their investment potential and serves as a critical factor in their national and governmental development. The authors suggest estimating military spending as a proportion of budget revenues rather than that of GDP.

Keywords: military spending, economic development, Baltic states, GDP, budget, strategy

Introduction

The assessment of security problems is not an exclusive task of international relation, regional studies, and military
analysts. In a geographically small but politically significant region of the Baltic Sea, any military preparations should naturally be linked to the objective economic capacities of the state.

Imbalanced military expenditures can threaten the country's security no less than external threats. In the understanding of this circumstance, the expert and scientific community of Russia relies on the relatively recent Soviet experience.

The military spending growth is specific for the majority of the leading world economies. High military expenditures in these countries ensure the technological development of dual-use industries. For instance, it is practically impossible to separate economic indicators, the number of employees, and investment amount into civilian and military sectors in Boeing or Saab Group.

At the same time, small countries, and, above all, Estonia, Latvia, Lithuania do not have such experience. In the same way, they have limited experience of statehood in general. In these conditions, ensuring military security according to the principle “that’s what I want” is a threat not only to the Baltic States but also paradoxically to all their neighbors. Economic and political instability in the 21st century easily crosses borders, which is why there is a question of ensuring any possible security, its limits and quality.

For a long time after 1991, the Baltic Sea Region has been a territory of relative economic prosperity and political stability. The political course of the Baltic States implied limited cooperation with Russia. Finland and Sweden were ready to act as partners in the integration of Russia into the European and world systems. The Council of the Baltic Sea States (CBSS) and the Nordic Council of Ministers implemented a number of programs to introduce best practices on a wide range of issues, from environment to local government.

At the same time, both objective and subjective contradictions gradually accumulated. Russia's expectations for cooperation with Europe and Europe's expectations for cooperation with Russia are not the same. This mismatch was not a quick reaction to an event, it was more likely to be a trend. This question has been discussed in the modern research papers [1—5, etc.].

However, within the framework of this article, the issue of the Baltic States' role in the general context of the RU-EU relations seems to be more important. Meanwhile, the subject of this research is the militarization of the Eastern Baltic region, which began long before the events in Ukraine. The fact that "Political leaders of Estonia, Latvia, and Lithuania have considered participation in the alliance as an important element of Euro-Atlantic solidarity which allows smaller — from all viewpoints — states claim their participation in the decision-making process on global issues" [6, p. 15] is quite obvious.
At the same time, "smaller — from all viewpoints — states" presuppose the imperative of a rigorous economic assessment of any political decisions. Ralph Norman Angell, the winner of the Nobel Peace Prize in his program work "The Great Illusion: A Study of the Relation of Military Power in Nations to their Economic and Social Advantage" notes: "The success of smaller states is a fact that further demonstrates that wealth can be provided in addition to armament" [7, p. 40].

The militarization of the Baltic States occurs in the era of postmodernism: "The distinctions between the political and the economic, the public and the private, the military and the civil are blurred.

To introduce new coercive forms of economic exchange, political control is needed. A new, reactionary configuration of social relations is being set up, where the economy and violence are closely intertwined within the political paradigm" [8, p. 222]. It is noteworthy that the given processes are observed in many countries. However, this interrelation is more apparent in smaller countries.

The hypothesis mentioned above needs certain argumentation. Consequently, this research is aimed at identifying objective economic limitations to the present day strategy for militarization in the Baltic States.

Another goal of this study is to demonstrate that the sustainable social and economic development is impossible given the growing military spending and shrinking economic ties with Russia.

The study also aims to prove that the present day model of military construction developed in the Baltic States after 2004 (joining NATO) and before the events in Ukraine (2014).

As an additional task, it is presumed to prove that course on militarization is not connected with events in Ukraine and is a part of Baltic States' political agenda.

Moreover, the goal of this study is to assess the indirect impact of macroeconomic regional military spending.

The hypothesis of the study, which was confirmed, was the expediency of analyzing military expenditures not as part of GDP, but as part of the revenue side of the budget.

### Baltic States: Dynamics of Military Capabilities and Their Economic Assessment

Existing information indicates that the military spending in the Baltic States started increasing when they joined NATO. The Baltic Air Policing program was launched on March 30, 2004. The modernization of former Soviet airbase Zokniai, the biggest one in the Baltic States, cost
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43 million euros [10]. Since April 2014, the Estonian air base Ämari has been involved in the Baltic Air Policing Mission. Four NATO fighters on a rotational basis have been deployed. This is former Soviet airbase Suurkül, for the modernization of which NATO has allocated 30 million Euros [11].

In 2012, the Baltic States’ expenditures on the Baltic Air Policing Mission’s support amounted to 2.2 million euros. In 2016 they went up to 10 million Euros [12, 13]. It is important to mention that at this stage the infrastructure costs were covered not by the recipient countries, but directly from NATO budget.

A former Soviet airfield Lielvārde, located in Latvia, has become another major military infrastructural facility in the Baltic States. It underwent a major modernization in 2007—2014 when NATO spent 45 million euros [14]. Similarly, since 2015, the US Air Force planes have arrived regularly in Ämari to support the Atlantic Resolve Operation within the frameworks of so-called Theater Security Package (TSP). It's about the F-15 Eagle fighter and the A-10 Thunderbolt II attack aircraft [15]. It should be pointed out, that the deployment of the F-16 Fighting Falcon multi-purpose fighters capable of carrying American tactical nuclear bombs means not only military-political risks but also the corresponding economic expenditures [16; 17].

Since 2015—2016, economic structure support has been provided by the Baltic States’ national budget. However, 6.5 million Euros for the further modernization of Ämari airbase has been allocated.

Since April 2014, NATO ground forces, mostly American, in addition to the air forces have become available. Thus, since February 2017 to June 2017, the 1st Battalion of the 68th Armored Regiment of the 3rd Armored Brigade Combat Team of the 4th Infantry Division (the 3rd brigade group was transferred to Europe from the United States for nine months in early January 2017) was deployed in Rukla (Lithuania), Adazi (Latvia) and Tapa (Estonia) bases. The battalion accounts 628 soldiers and officers, 29 M1A2 Abrams Main Battle Tanks (MBT) and 32 Bradley Infantry Fighting Vehicles (IFV) and Cavalry Fighting Vehicles (CFV) [20, p. 101—102].

Maintaining this military infrastructure requires heavy funding in accordance with the standards of NATO.

To speed up the American troops deploying in the Baltic Sea region, the depots for military equipment are constructed within the framework of the European Activity Set (EAS), which has been implemented by the USA since 2013. The first military depot was built in Lithuania in 2015. It houses nearly 200 military units and munitions (including M1A2 Abrams MBTs and Bradley IFVs), which is enough to arm a company-sized element. The same kind of storage depots was built in Lithuania and Estonia in 2017. As the result, every country of the Baltic Sea region
must have a set for equipping the US mechanized infantry company (14 units of heavy armored vehicles (tanks and/or IFVs) plus light support vehicles) [9]. Taking into account weaponry and military equipment housed in Poland, all this would be enough to equip a combined battalion of the US land-forces [21].

At the NATO summit in Warsaw on July 8—9, 2016, it was decided to deploy four multinational tactical battalion groups to reinforce an advanced presence in Poland and three Baltic countries (one in each country). Their deployment began on January 24, 2017, and finished on June 19, the same year [22; 23].

Germany headed the battalion group in Rukla (Lithuania). The group also includes the military from Belgium, Netherlands, Luxemburg, and Norway (the total number of the group is about 1,022 personnel). French armed forces (about 1,100 personnel) joined Great Britain battalion group of Tapa (Estonia). The troops from Spain, Italy, Poland, Slovenia, and Albania (about 1,138 personnel) joined the Latvian base group Adazhi, which was led by Canada. Thus, all the joined tactical battalion in the Baltic Sea region accounts for approximately 3,260 NATO troops, which roughly corresponds to the size of one brigade [24].

The deployment of additional troops and the increase in the number of own armed forces required the creation of additional military infrastructure and the modernization of the existing one. For example, in 2016 Latvia invested 23.5 million euros in the development of military infrastructure, and by 2017—42 million euros [25]. In Lithuania, deployment of the NATO multinational battalion alone required an additional infrastructure expenditure of about 5.8 million euros [26]. Estonia in 2016 allocated 10.1 million euros for the development of infrastructure for NATO forces [27].

Expenditures of the Baltic countries and on the development of their armed forces have significantly increased, incl. arms purchases, including armored personnel carriers (APC) and infantry fighting vehicles (IFV), self-propelled guns (SPG), anti-tank guided missiles (ATGM), man-portable air-defense systems (MANPADS), medium-range surface-to-air missile (SAM) systems, etc. (see for more details [28]). The equipment that is purchased has often been in use. An example of this was the purchase of old British armored vehicles by Latvia for the amount of 249 million euros, which brought about the scandal and investigation [29]. However, in some cases, the purchases are of some modern designs. For instance, Lithuania has bought German Boxer APC, Norwegian-American NASAMS-2 mobile medium-range SAM system, American Javelin ATGM and Stinger MANPADS, Latvia — Swedish RBS 70 NG MANPADS and Israeli Spike-LR ATGM, Estonia — South Korean K9 Thunder long-range self-propelled howitzers (together with Finland), Javelin ATGM and French Mistral-3MANPADS.
Given the economic aspect, a paradoxical situation arises. Infrastructural support of obsolete military equipment requires more costs, which is connected with the specifics of the maintenance. Similarly, the heterogeneity of military equipment and equipment characteristic of the Baltic states creates not only organizational but also economic problems.

Let's get down to the military-economic aspect of the problem in a more detailed way. The military needs of the state represent the totality of its economic needs, which are necessary for the material security of the country's military security, for the armed protection of its national interests. The greatest increase in military spending is typical for Central European countries in 2016. In 2016 compared to 2015 military expenditures grew mostly in Latvia (44% to 267.86 million euros) and Lithuania (35%, up to 575 million euros) [30].

According to the IHS Markit report, by 2020 the overall defense budgets of the three Baltic republics will reach $2.1 billion, which is twice the corresponding costs in 2004 when the countries joined NATO, and is the fastest growth of the "military" budget in comparison to any region of the world [31]. However, what is important is the extent to which the economies of the Baltic States can develop under such budgetary rules?

The Baltic countries certainly have a strong potential for cooperation with Russia and could become a zone of contact between the West and Russia, but this does not happen. Moreover, according to expert estimates, the disruption of economic ties with Russia results in 8—12% of GDP losses in each of the Baltic states [32, p. 45].

The political decision to break the production chains adopted decades ago triggered the transformation of economic policy in the Baltic States and Russia. However, the interdependence in transit and logistics has proved to be stronger than economists and politicians assumed. The EU reforms and the new budget cycle (2020) are accompanied by a change in the model of financial planning, a reduction in budget subsidies to European states. Brexit also means a change in the model of financial relations between Brussels and the Baltic states.

Budget planning in these conditions is based on planning "from what has been achieved" and involves the analysis of expected change in both expenditures and revenues. It is unacceptable to adjust the projected budget figures according to the political decisions of simply advisory nature.

Under these conditions, disrupted economic ties with Russia mean losses of 3—5% of GDP or at least 10% of the budget revenue.
Military Expenditures versus Balanced Development:
Traditional and New Approaches

Studies of the impact of military spending on the economy have had a long history. As it was written more than 60 years ago, "for the American people, of course, there is nothing new in the idea of ensuring the prosperity of the economy through spending on weapons" [33, p. 3]. American approaches to the economic analysis of military spending are very complex, their improvement is rightly associated with the post-war period [34].

Recognizing that the defense sector is potentially one of the most technologically advanced in the national economy in countries with high military expenditures, “the defense can hardly be denied as an inherent driving force for diversifying the market economy”.

For this, double-use technologies are used, partnerships of state companies with commercial enterprises are formed to fulfil defense needs. The process was named as the "spiral development" method and the "spiral acquisition of weapons" principle, suggesting a reduced transition time to new technologies with the progressive build-up of necessary knowledge. It was assumed that these measures should not only promote the expansion of possibilities to bring down the cost of creating military equipment, but also enhance the activity of the technological transfer [36, p. 27].

Providing a source of demand for new technologies that do not yet have a niche in the market, military spending provides an important impetus for research and development, which affects more broadly innovation in general. Therefore, it is not surprising, according to researchers (including Dan Steinbock), that during the Cold War, defense R & D was a key "contributor" to national growth through large-scale development of important general-purpose technologies [37].

On the other hand, there is another point of view, suggesting that "high defense spending, security and pensions take money that could be invested in human and physical capital" [38, p. 6]. The authors believe that the growth of military spending and the growth of the military security component for the Baltic states lead to other economic consequences than for Sweden, the US or Russia.

There are some systemic economic signs of this situation.

Firstly, the increase in military spending causes a reduction in other national spending. This is guaranteed for infrastructure and health care costs.

Secondly, most of the expenses of wartime are formed even before the military conflict begins. For instance, the country strives for a steadily high level of military spending. However, political risks cause capital
outflow. Economic policy, political institutions, and political freedoms continue to deteriorate in the situation of growing of military threats, either imaginary or real once.

Even in case of a fairly successful economic development (e. g., Estonia), there is still an unresolved question how the economic indicators would be compared to the military spending of Germany (1.2%). In other words, can Lithuania afford to double its military spending, twice as high as those of Germany if the economy of the latter is 40—45 times as big? Large-scale economic growth is necessary to avoid this trap, but in the Baltic states it is impossible because of external and internal factors. An additional 2.2% of GDP military spending during a seven-year period leads to a permanent loss of about 2% of GDP [39].

Thirdly, the economic expenses of militarization are prolonged at least for the medium term. The chairman of fraction «Consent» in the Latvian Saeima (parliament) Janis Urbanovich named the state budget of 2017 a front-line one. According to the parliamentarian, the country is allegedly preparing to repel an attack from the east.

"Russia is not an enemy of Latvia. Enemies of Latvia are inner ones such as poverty, stupidity, weak health care and education systems”, Urbanovich emphasized [40]. The number of local economic projects, which will be slowed down, still grows. "I think, because of the preparation for war, no one is ready to invest in the military,” said OU Navesco (Estonia), a member of Tõnis Seesmaa in August, 2016 [41].

The aforementioned reason represent the real macroeconomic prospects of the national economies of the Baltic states. Existing mathematical approaches do not allow to unequivocally evaluate the impact of military spending on economic growth. This conclusion, which is based on the analysis of quantitative studies using mathematical models (mainly econometric methods and factorial analysis), is presented in the forthcoming study [42].

This situation was evaluated by other experts and we totally agree with their conclusions. “Numerous studies have neither convincingly supported the opinion of the negative impact of military spending on economic growth, nor have they refuted the hypothesis about a positive interdependence between defense spending and economic growth” [43, c. 27, 44].

The correlation between military and economic development priorities is not probably new in social and political sciences, and it has been discussed for a long time. Quantitative research methods, so popular in the 20th and especially 21st century, certainly contributed to the analysis of this issue. However, until now there has been no clear understanding of how to ensure a balanced economic development in the conditions of real or hypothetical military risks. There are different points of view on
the impact of increasing military spending on the national economy. This issue which has been repeatedly analyzed for developed European countries, the USA, the Soviet Union, China, is now becoming more acute also for the Baltic states: Estonia, Latvia, Lithuania. These countries try to revitalize an old discussion about the consequences of increasing military spending.

Military Spending:
Economic Consequences for Smaller Countries

There is a traditional question: to which extent does military spending facilitate economic development? Does it enhance or hamper it? The answer is obvious for leading economies. For us, it is more important to assess the consequences of mobilizing technical and military capacities in smaller countries.

From our point of view, there is no definite answer to this question. Moreover, when analyzing the Baltic Sea region, the scale effect proves to be particularly important. In other words, the quantitative and qualitative indicators of the economic development of Germany and Sweden cannot be compared directly with that of Estonia, Latvia, and Lithuania. In Germany and Sweden military construction contributes to the modernization of the existing infrastructure, stimulates the construction industry, and has a positive effect on certain service sectors, especially public catering. However, as for the Baltic States, military spending leads to an increase in innovation activity, development of high tech, including dual-purpose technologies, but not in every country.

Investing in the military-industrial complex (MIC) of Sweden or Germany is cost-effective since in the vast majority of cases the money is spent on dual-purpose technologies. As for the Baltic States, the situation is quite different. The Estonian robotic caterpillar tracks designed by MILREM and presented at the UMEX-2016 International Exhibition in Abu Dhabi are used for military purposes only. However, the development of this and other systems required enormous investment, too heavy a burden for Estonia’s national economy.

The certification and compliance of these products with the NATO standards is a technological and, consequently, an economic problem. It is even more expensive than producing military equipment and the production cost per unit is very high. This problem does not exist in Germany. Germany’s military spending is relatively low, but still the country has a well-developed military industry: its military export volume ranks fourth in the world. However, if Germany meets the NATO requirement
to invest 2% of its GDP in defense, then, according to some estimates, the country will have needed a budget which exceeds the present budget 1.2% (75 bln) by 2024 [45].

In 2016, Latvia's military budget amounted to 280 million US dollars [46]. Investing heavily in research and development, Germany and even politically neutral Sweden benefit greatly in many spheres. These countries develop dual-use technologies penetrating new markets. Politically neutral Sweden is a smaller country but it provides a wide range of military supplies to the NATO. However, this exception confirms the rule: modern high-tech production demands an appropriate system of staff training, whereas the absence of such production requires a completely different system of professional education [47].

The share of military spending in GDP is calculated as the aggregate of armament, military personnel costs, depreciation of fixed capital (barracks, structures, etc.) and operating costs. Let us explain it using an example. If Sweden adopts the Strf 9040 infantry fighting vehicle (IFV) manufactured by NV Utveckling AB, then it will be manufactured and maintained in Sweden which is beneficial for the national economy. That is why Sweden pays a different price for the Strf 9040 vehicle compared to Poland, which imports this IFV.

It is more complicated to calculate military spending taking into account dual-use infrastructure costs and expenditures related to it. How is it possible to assess one-off NATO payments? To which extent can they compensate for defense spending? According to the Ministry of Defense of Latvia, the country will have received 71 million euros from NATO by 2021. The funds received are planned to be used for the development of the country's military infrastructure, as well as for the deployment of the Allied troops that arrived in Latvia in 2017. Earlier, Latvian authorities announced the plans to meet one of the NATO requirements to allocate no less than 2% of GDP for military expenditures. As of today, 2% of GDP of Latvia will account for approximately 600 million US dollars a year, i.e. it will have doubled. Taking into account the fact that Latvia's national debt has increased from 1.5 billion to 9.5 billion euros [which is a one-year national budget of the country] during the last ten years [48], such a policy may lead to a loss of control over the key macroeconomic processes.

There is an even more difficult problem — the estimation of indirect losses. One of the world's largest insurance companies, American International Group (AIG), set up in Vilnius in 2015, decided to relocate its service centre and move it away from the Lithuanian capital in 2017. In 2016, the same decision was made by the manufacturer of soft drinks Coca-Cola and the manufacturer of chips Estrella [49]. The situation is similar in Estonia: instead of the planned investment in Estonia, Apple,
an American multinational technology company, will invest in Denmark and Ireland [50]. There are several reasons for it: high electric energy costs in Estonia and the country’s close proximity to Russia.

The focus is always on the military threat: on the one hand, it attracts military investment, but on the other hand, it deprives the country of the majority of long-term investments in the economy and, especially, social capital. Tactical benefits from dual-use infrastructure in the conditions of the destruction of social infrastructure cannot be compensated.

Conclusion

In conclusion, we note the necessity to adjust the basic methodology. We see it as incorrect to relate military spending calculation to GDP. The share of military expenditures should be compared to budget revenues. For instance, in Estonia, the state budget revenues in 2017 accounted for 9.42 billion euros. Defense spending for the first time grew up to 2.18% of GDP — almost 500 million euros. In addition, all the expenditures requiring the Allies presence in Estonia, including investments in the military town of Tapa, will be financed. Moreover, the funds of the defense investment program for 2018—2020 will be used in the total amount of 60 million euros and also the construction of the eastern border will continue [51]. Thus, 560 million euros are to be calculated out of 9.42 billion euros. In our case, open military expenditures on budget items amount to almost 6.0% of the budget revenue. A similar situation is typical for Latvia and especially Lithuania.

Given the above-mentioned analysis, three scenarios of the political situation in the Baltic States and Russian-Baltic relations can be identified [52]. Relating to the topic of this article, the strategy of managed conflict and direct local conflict bring the same outcome which is the destruction of the economy and political instability. Only peaceful coexistence and cessation of militarization in the Baltic region will contribute to the economic development of both the Baltic States and Russia.

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