

STUDY REGARDING THE DEFENSE EXPENDITURE ANALYSIS IN NATO

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Abstract: Armed conflicts are a reality of the present world. Military power is an active actor in domestic and international relations. Defense must have the financial allocations necessary to sustain a flexible and modern army. The macroeconomic and geostrategic factors, including the change of power poles from the West to the East, the demographic changes and the limited resources are elements that will deeply reconfigure the trends in military expenditure. This is the case in less developed areas of the world where trends will bring instability and will put additional, internal and external pressure on the challenges of defense and security. NATO countries have assumed the 2% of GDP target for defense expenditure, but are making great efforts to reach this level. In 2016, only 4 out of 29 NATO members, or 14% reached the target of 2% of GDP for military expenditure and 20 out of 29 NATO countries spent less in absolute terms in 2016 compared to 2014.

Keywords: expenditure, defense, gross domestic product, NATO.

1.Introduction

In each country, *national defense* is an important component of the national security strategy and at the same time expresses the content of the state's external function. For national defense, irrespective of the state, important financial resources are allocated year after year. These resources serve the maintenance and functioning of national armies, participation in various military alliances, waging warfare or removing their consequences, maintaining the military bases in foreign territories, military aid to other countries, and so on.

There are differences between the definition of NATO defense expenditure and that of the component national states. NATO defines defense expenditure as being "*payments specifically made by a national government in order to meet the needs of its armed forces or allied armed forces.*" In NATO, the armed forces include the land

forces, air forces, naval forces and other common formations belonging to the interior ministry, border guards, national police, customs, etc.

For example, in Romania's budget the existence of defense expenditure also indicates their destination, namely "*for the maintenance of the armed forces, other tangential actions, as well as the participation of our country in a series of alliances, military blocks or armed conflicts*" [1]

In general, (military) defense expenditure is of two kinds: *direct* and *indirect*. The *direct* expenditure includes what is spent on the maintenance of the armed forces in the country or within the military bases in other countries, resulting in the procurement of goods and services demanded by such maintenance, as well as in the equipment with gear, weapons, combat techniques; these costs being included in the budget of the Ministry of Defense in each country.

Besides these, there are other military expenditures, financed by special funds separated from the state budget, or there are military "civil" expenditures included in the budgets of other ministries. Also in different countries there are various structures related to these expenditures (whether or not military pensions are included, gendarmerie expenses are sometimes included).

Indirect military expenditures are considered to be those related to wiping out the consequences of wars or to the preparation of future armed actions: payments to the public debt contracted for equipping the army or for waging the wars; war damages that have to be paid by the defeated countries to the countries that have won the war; expenditures to recover their own destroyed economy; pension payments to orphans, invalids or widowers of war; scientific research having a military purpose, etc. Knowing all of these expenditure categories and identifying them in the overall public financial effort of states make it possible to measure the entire military financial effort more closely to the truth.

Our scientific approach is based on the reality of the present world, namely the existence of armed conflicts. The method of managing armed conflicts is given by the military power of the states that have resorted to resolving social, economic and political problems or differences and conflicts by using weapons.

Military power, as an important part of the theories about the concept of power, is based on the political foundation, because it is the political power that establishes the way in which military power is realized and manifested. The military power shows the capacity of military action of a state by using the armed forces of the potential military system, the military capabilities provided by its military potential: budget, personnel, infrastructure, arms, logistics, defense industry and specific research-development institutions, etc., in order to ensure their own security and of the allies

and to fulfill the political/military objectives/interests.

Military power is an active actor in domestic and international relations. Defense must have the financial allocations necessary to sustain a flexible and modern army. The macroeconomic and geostrategic factors, including the change of power poles from the West to the East, the demographic changes and the limited resources are elements that will deeply reconfigure the trends taking place in military expenditure.

As a result, it is necessary to analyze defense expenditure in the most powerful military body, NATO, where we find large states such as the United States of America, the United Kingdom, as well as emerging economies such as Turkey, in order to identify the dynamics of defense expenditures, as well as their potential trends for the forthcoming period, by using the official statistical sources.

According to many opinions, the term *analysis* is derived from the Greek *analisi*, which means the disassembly of an object or phenomenon, either factually or mentally, in its component parts, in its simple elements [2], and according to other opinions, originated from the French noun "*analyze*", which has the meaning of decomposing a whole into its component elements. So, in essence, both opinions underline the same meaning.

In the Explanatory Dictionary of the Romanian Language, analysis is stated to be a "*scientific method of research that is based on the systematic study of each element; the thorough examination of a problem.*" This definition highlights the fact that analysis is a method of scientific research.

In Professor Cainap's view, analysis is "*a research method objectively required by any science. Through analysis, there can be known the components of the phenomena and processes, the correlation between them, their structure, the factors and causes that determine their genesis and evolution, the laws of their formation and*

development are underlined, the decisions for their future development are established "[3]. Through this approach, the author broadens the scope of analysis as a research method, considering that it can be used by any of the sciences.

Another approach of the analysis was encountered with Professor Nicolae Balteş [4], which states that *"analysis, as a general method of knowledge, involves the breakdown of phenomena and processes into their component parts, the evaluation of the correlation between them, the underlining of their structure, the factors and the causes which determine their genesis and evolution, highlighting the law of their development, substantiating future strategic decisions."* In the conceptual approach of the analysis, the author points out to the fact that the phenomena and processes must be decomposed into simpler parts, in order to measure or quantify the interdependence between their component parts, structured as such, on the one hand, and the determination of the factors and the causes that determine the occurrence and evolution of phenomena and processes, on the other hand. Identifying patterns or rules in the evolution of phenomena and processes is the basis for scientific foundation of long-term decisions.

Taking into account the main ideas regarding the content of the analysis presented above, we argue that analysis is a scientific research method, necessary for any science, used to know, by studying the components of different phenomena and processes, their structure, factors and causes which determined their appearance and dynamics.

Being a method of research used by any science, obviously in public finances in general, it will be the analysis for both income and public expenses and in this case we will analyze the defense expenditures. In the analysis of defense expenditures in NATO, the following issues were considered during the 2015-2017 period:

a. *The determination of the type of analysis derives from the characteristics specific to*

*each phenomenon or economic-financial process. As an analysis, we chose a combination of analysis types, namely **the analysis of quantitative (volume) and structural dynamics**;*

- The analysis of the quantitative dynamics of defense expenditures has the significance of a research method in motion (over a period of time) and aims to determine the proportions of the volume of money obligations, as well as the causes that determined their appearance and dynamics.
 - The analysis of the structural dynamics of defense expenditures has the significance of a research method in motion (over a period of time) and their structure, aiming to determine the proportions of the volume of monetary liabilities in GDP that affect the contributor, as well as the causes which determined their appearance and dynamics.
- b. *Sources of information.*
We considered determining the information provided by:
- National statistical institutes belonging to NATO member countries.
 - Statistical documents issued by NATO.
- c. *The analysis procedures to be used in this case* are of two kinds: procedures for the overall analysis and for the structure and correlation procedures. The procedure used for the overall analysis is the comparison. It will be used in the comparative analysis of the general, structural and dynamic level of public expenditures.
- d. *Computational tools:* level, structure, and dynamics indicators of public expenditures.

2. Analysis of the quantitative dynamics of defense expenditures in the 2015-2017 period

We begin the analysis by presenting the volume of defense expenditures in millions of dollars in the table below:

Table no.1: Defense expenditure in NATO in current prices, millions of dollars

Country	2015	2016	2017 (estimated)
Albania	132	131	152
Belgium	4202	4315	4303
Bulgaria	633	671	821
Canada	18700	18172	20315
Croatia	669	623	651
Czech Republic	1921	1866	2119
Denmark	3364	3593	3667
Estonia	463	497	519
France	43474	44191	44333
Germany	39813	41590	42875
Greece	4517	4635	4572
Italy	19566	22373	22558
Latvia	281	398	487

Lithuania	471	636	785
Luxembourg	249	236	278
Great Britain	59942	56964	54863
Montenegro	57	62	72
Norway	5816	6064	6309
The Netherlands	8668	9108	9426
Poland	10596	9405	9997
Portugal	2644	2615	2726
Romania	2581	2633	3844
Slovakia	986	1003	1090
Slovenia	401	449	462
Spain	11090	9971	11665
USA	641253	664058	683114
Turkey	11957	12629	12315
Hungary	1132	1289	1355

Source: Communiqué PR/CP(2017)111, Defence Expenditure of NATO Countries (2010-2017) [5]

In Table no. 1, it can be noticed that the largest amount of defense expenditures occurs in the USA, UK, France, Germany, Italy and Canada, while the lowest costs are in Montenegro, Albania, Latvia, Slovenia, Lithuania, Luxembourg. Romania has a volume of expenditures at an average level compared to the average, with a double volume compared to its neighbors in Hungary, four times higher than Bulgaria, but five times smaller than Poland.

The evolution of expenditures in the analyzed period is oscillating, only the countries with an economic power and economic growth having an increasing trend, as we notice in the USA, Germany, Italy, France, Denmark, Turkey, Norway. A negative surprise is provided by

the UK, Spain and Poland whose volume of expenses surprisingly decreases in 2016 compared to 2015. Similarly, smaller countries or the new entrants into NATO, such as Bulgaria, Romania, Estonia, Latvia and Lithuania considerably increased their volume of defense expenses from year to year.

Certainly the level of these expenses is influenced by the density of population, the GDP also influenced by the economic growth, the size of the armed forces, equipment of the armies, the role and place of the countries within the alliance, their geographical positioning, etc.

For the precision of the analysis, in the table below we present the size of each country's GDP.

Table no.2: Real GDP of the NATO countries in prices of 2010, billions of dollars

Country	2015	2016	2017 (estimated)
Albania	13	14	14
Belgium	508	514	523
Bulgaria	55	57	58
Canada	1796	1822	1857
Croatia	58	60	62
Czech Republic	224	229	236
Denmark	341	345	356
Estonia	23	24	24
France	2778	2811	2846
Germany	3697	3766	3840
Greece	244	244	247
Italy	2059	2078	2097
Latvia	28	29	30
Lithuania	45	46	47
Luxembourg	62	65	68
Great Britain	2682	2730	2773
Norway	465	470	476
Montenegro	4,5	4,6	4,8
The Netherlands	868	887	908
Poland	556	571	592
Portugal	228	231	236
Romania	190	199	207
Slovakia	101	104	108
Slovenia	49	50	52
Spain	1415	1461	1501
USA	16598	16866	17227
Turkey	1081	1117	1156
Hungary	143	146	156

Source: Communiqué PR/CP(2017)111, Defence Expenditure of NATO Countries (2010-2017) [6]

Among the countries with significant GDP for global economies, we find the same countries that also allot a considerable amount of resources to financing their military activities: the USA, Germany, France, Italy, Canada. The GDP trend is growing regardless of the country, which creates the premises for a continuous development of resources, which

also allows for an increased volume of defense expenditures.

3. The analysis of the structural dynamics of defense expenditures in the 2015-2017 period

We will further present the share of defense expenditures in the GDP.

Table no.3: The share of defense expenditure in real GDP, in prices of 2010, million dollars.

Country	2015	2016	2017 (estimated)
Albania	1,16	1,10	1,22
Belgium	0,92	0,93	0,91
Bulgaria	1,26	1,28	1,57
Canada	1,20	1,19	1,31
Croatia	1,37	1,24	1,27
Czech Republic	1,04	0,97	1,07
Denmark	1,10	1,16	1,17
Estonia	2,06	2,15	2,14
France	1,79	1,79	1,79
Germany	1,18	1,20	1,22
Greece	2,32	2,38	2,32
Italy	1,01	1,12	1,13
Latvia	1,04	1,44	1,70
Lithuania	1,14	1,49	1,77
Luxembourg	0,43	0,39	0,44
Great Britain	2,08	2,18	2,14
Montenegro	1,42	1,49	1,66
Norway	1,47	1,55	1,59
The Netherlands	1,13	1,15	1,17
Poland	2,22	2,00	2,01
Portugal	1,33	1,28	1,32
Romania	1,45	1,41	2,02
Slovakia	1,13	1,12	1,19
Slovenia	0,94	1,02	1,02
Spain	0,93	0,81	0,92
USA	3,58	3,61	3,58
Turkey	1,39	1,47	1,52
Hungary	0,93	1,04	1,05

Source: Communiqué PR/CP(2017)111, Defence Expenditure of NATO Countries (2010-2017) [7]

We notice that there is a group of countries that consistently stick to their commitment since their entry into NATO, regardless of the year, namely the allocation of 2% of GDP for defense expenses, such as: the USA, Great Britain, Greece, Estonia, Poland, Romania, which points to their responsibilities, on the one hand, and their interest in the modernization of the armed forces or in the military field, on the other hand.

Other countries are approaching this target, namely France, Lithuania, Bulgaria and Turkey. A negative surprise is provided by the countries with small allocations, below 1% of the GDP for military expenses, but with large GDP, such as Spain, Luxembourg and Belgium, and other countries allocate just over 1% of GDP for defense expenses, although their GDP is significantly higher than the GDP of most countries, such as Germany, Italy and the Netherlands. It is certainly difficult to analyze what determines these last states not to honor their obligations.

4. Conclusions

The defense budgets of NATO member countries reflect the extent of their development and the level at which they understood the obligation to allocate 2% of GDP for defense. The budgets and the distribution of defense expenditures reflect the level of decision maturity and understanding in these countries that the allocated resources can determine, on the one hand, the modernization of the armed forces and the increase of the military investments and, on the other hand,

they can contribute to the increase of the military power and thus may discourage the future military activities of other states in the world who could use the armed forces in internal or external conflicts.

As it results from the two brief analyses, the NATO countries have assumed the target of 2% of the GDP for defense expenses, but they are making great efforts to reach this level. In 2016, only 4 out of 29 NATO members, or 14%, reached the target of 2% of GDP for military expenditure and 20 out of 29 NATO countries spent less in absolute terms in 2016 compared to 2015.

Like any other social system, the army has involved and involves a great effort for the continuous equipment of the armed forces. For the most part, the victories on the battlefield were justified through the level of equipment of the troops, through the way in which the material conditions were ensured for preparing and conducting the military campaigns. Modern conflicts have emphasized the role of technological development, as well as that of military logistics.

The macroeconomic and geostrategic factors, including the change of power poles from the West to the East, the demographic changes and limited resources are elements that will deeply reconfigure the tendencies in military expenses. This is the situation in the less developed areas of the world, where the tendencies will bring instability and will put additional, internal and external pressure on the challenges of defense and security.

References

- [1] Belean P., Anghelache G., Risti L., Gînguță A., *Finanțele publice ale României*, Editura Economică, București, 2007, p. 244;
- [2] Florea Cristina Gabriela, *Analiza economico-financiară. Teorie și studii de caz*, Ed. Nevali, Cluj-Napoca, p. 7;
- [3] Căinap Ioan, *Analiza activității macroeconomice și financiare*, Ed. Dacia, Cluj Napoca, 1985, p. 36 ;
- [4] Nicolae Balteș, *Analiză și Diagnostic financiar*, Ed. Universității „Lucian Blaga”, Sibiu, 2010, p.14;
- [5] https://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2017_06/20170629_170629-pr2017-111-en.pdf, p.7;
- [6] https://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2017_06/20170629_170629-pr2017-111-en.pdf, p. 9;
- [7] https://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2017_06/20170629_170629-pr2017-111-en.pdf, p. 8.