

The NATO Members and the Budget Guidelines

Herman Matthijs^{1,2*}

¹Department Public Administration & Management, University of Ghent (Ugent) Belgium; ²Department of Political Sciences, Free University of Brussels (VUB), Belgium, Europe

ABSTRACT

This study examines the defence expenditures of NATO (North Atlantic treaty Organisation) of the member countries over the period 2014-20 in relation to the NATO 2014 summit in Wales. The research of this study is to examine the following points: How has defence spending by the member states evolved in the period under consideration (2014 – 2020) and more specifically the evolution to the 2% GDP military expenditures; Which states already meet the second target of the 2014 Wales summit, namely: the 20% investment in equipment of the national military budget. The current figures are based on the primary budgetary sources as published by the NATO, namely: the defence expenditures of NATO countries (2013-2020) in the yearly report of 2020 and the related press communication of the NATO.

Keywords: Defence budgets; NATO; Wales guidelines

INTRODUCTION

The reasons of this research concerning the military expenditures in the NATO members are the following two types:

- What's the actual situation of the military spending in these states?
- What are the achievements in these states related with the NATO summit goals of the Wales summit between 2014 and 2020?

This study concerns several items concerning the financing of the defence systems of the NATO member states

The following points are a part of this study:

- The military expenditure of the members in relation with the 2% GDP;
- The military investments in equipment comparing with the 20% goal in the budget.

This study concerns the defence figures of the present 30 member states of the NATO, but not Iceland. Because this country has no armed forces and manages only a small coast guard. This article examines and compares the defence expenditures between 2014, the Wales summit, and the year 2020 included. In 2014 there were 28 member states in the NATO. The last two entered states are the republic of Montenegro in 2017 and North Macedonia in 2020.

Like already said, the figures in the article are concerning only 29 member states, excluded the republic of Iceland.

RESEARCH METHODOLOGY

This study attempts to analyse and to compare the NATO defence figures over the last decade. The materials of this study are the figure is the 2021 NATO press communication and the yearly report concerning the defence expenditure [1,2]. The advantage of the use of this NATO figures is the harmonization of the numbers over all the members of the NATO. This NATO figures are using the same method for the calculation of the defence figures, which are coming from the national defence budgets. The NATO 2021 mentioned communication explains what defence expenditures are [3-7].

It concerns the payments made by the defence national budgets for all the components of the armed forces: uniformed or civilian personnel. Another remark is the fact that the outlays concerning the military pensions are also calculated in these figures. Because in some countries public budgets sometimes are relating these pensions in the military budget and in other state budgets related with the social security. All the pensions paid by the government to retired military and civilian employees of military departments are included in these NATO figures concerning the defence expenditure.

Another additional comment is the fact that the military police

Correspondence to: Herman Matthijs, Department Public Administration & Management, University of Ghent (Ugent) Belgium and Department of Political Sciences, Free University of Brussels (VUB), Belgium, Europe, E-mail: herman.matthijs@skynet.be

Received: April 26, 2021; **Accepted:** May 30, 2021; **Published:** June 07, 2021

Citation: Matthijs H (2021) The NATO Members and the Budget Guidelines. J Defense Manag. 11:211.

Copyright: © 2021 Matthijs H. This is an open access article distributed under the term of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

forces used for civil assignments are parts in some the military budgets. This means that some police forces with a military character, but with civil and judicial services, are part of the military budget. Examples are the following countries: the Netherlands (Koninklijke Marechaussee); France with Luxembourg and Romania (Gendarmerie); Italy (Carabinieri); Portugal (Guarda Nacional Republicana); Spain (Guardia Civil) and Turkey (Jandarma). What also are including in these military expenditures are the peacekeeping and humanitarian operations as well as the outlays for the destruction of weapons. Another part of these expenditures are the 'R&D' (Research & development) payments. This last remark also applies to the military component of mixed civilian-military activities and the expenditure on NATO common infrastructure. Finally the NATO explains that war damage payments and spending on civil defence are both 'excluded' from the NATO definition of defence expenditures.

Wales Summit

The NATO Wales summit, hold in Cardiff September 5th [8], contains in point 14 of the declaration the budget agreement for the next years. The text says: "We agree to reserve the trend of declining defence budgets, to make the most effective use of our funds and to further a more balanced sharing of costs and responsibilities." This fourteenth point also underlines the importance of our security and the need for a stronger defence industry across the Atlantic. Therefore this NATO summit taking current commitments into account by the following considerations:

- Allies currently meeting the NATO guidelines to spend a minimum of 2% of their GDP (Gross Domestic Product) on defence will aim to continue to do so. Likewise, allies spending more than 20% of their defence budgets on major equipment, including related research and development, will continue to do so;
- Allies whose current proportion of GDP spent on defence is below this level will: halt any decline in defence expenditures and aim to increase defence expenditures in real terms as their GDP grows. Even the declaration says for this second point the aim to move towards the 2% guideline within a decade with a view to meet their NATO capability targets and filling NATO capability shortfalls.

In other words this NATO declaration speaks about a 'decade' from the summit year or the members have to achieve these guidelines in their budget 2024! There is also a third resolution concerning a better balance (infra, point 6).

The 2% GDP Goal

The first table of this study evaluates the member countries positions in relation to the 2% GDP goal. The 29 countries are divided, per year between 2014 and 2020, in five categories. The first one is the group of countries with a GDP contribution of less than 0,50%, followed by the group 0,50% - 0,95% GDP share, the category of members with a military budget effort between 1% - 1,49% GDP, the group 1,5% - 1,59% and finally the last category with the Table 1.

By the start of the Wales declaration in 2014 only three members were in accordance with the 2% GDP goal, namely: Greece, the United Kingdom and the United States of America. The last two countries (UK and USA) are traditionally military powers in relation to their history, the present surface of these states and the nuclear capacity. The Hellenic republic has a high defence GDP share because of the Turkish threat in relationship with the political situation on the island of Cyprus. The Greece defence GDP share was 2,22% in 2014 and went up to 2,68% in 2020!

The United Kingdom spent 2.14% in 2014. The lowest point was reached in 2015 with a 2,03% GDP share for the defence expenditures. Then the military budget efforts from London are increasing to 2,32% in 2020. The USA had always the highest defence GDP share with 3,73% in 2014 and the lowest point in 2018 with 3,27% Over the last two years this percentage increases to 3,73% in 2020. These three countries are the only NATO members, which have over all the studies years in this article a defence share of more than 2% GDP.

In the year 2015 Estonia and Poland reached the Wales goal of 2% GDP for defence. Poland didn't achieve this figure in the next two years: 2016 (1,99%) and 2017 (1,89%). This country financed in 2018 the military budget with a share of 2,02% GDP and went in 2019 just under the goal (1,98%). This East-European republic did a greater budget effort in 2020 (2,31%). The threat coming from Russia and knowing the past under the Soviet occupation are certainly the main reason for the support in these countries in relation for military expenditures.

Over the years 2016 and 2017 only four countries reached the NATO goals: Estonia, Greece, the United Kingdom and the United States of America.

This situation can also be explained by the fact that a lot of states were still saving in their defence budgets over these two years. The relevant figures and GDP share are mentioned in the second table of this study (Table 2).

Indeed, in the beginning of this decade the defence expenditures

Table 1: The 2% GDP goals 2014 – 2020.

Year	0% - 0,49%	+ 0,50%	+ 1%	+ 1,5%	+ 2%
2014	1	8	11	6	3
2015	1	4	16	3	5
2016	1	4	16	4	4
2017	0	5	12	8	4
2018	0	4	13	6	6
2019	0	3	12	7	7
2020	0	1	10	7	11

Source: Own calculations based on the NATO yearly reports.

Table 2: NATO average GDP military expenditures (2014 – 2020).

2014: 2,58%	2017: 2,40%	2020: 2,77%
2015: 2,48%	2018: 2,41%	
2016: 2,48%	2019: 2,55%	

Source: NATO yearly reports.

were decreasing as a result of the national problems with the public finances and the financial consequences of the banking crisis of 2009. Between 2013 (2,76%) and 2014 (2,58%) there was already an average decrease of nearly 0,20% GDP over all the members.

The lowest point was reached in 2017. Then the political opinion realised the growing threats for the NATO area (terrorism, Middle East, Persian Gulf, China, Russia etc.). In 2019 the NATO reached about the same share/figure as in 2014 and in 2020 the average of this military organisation is on the same level as in 2013!

Further, back to the first table. In the year 2018 six countries have reached the Wales summit goal of 2% GDP. Besides the five mentioned members also a second Baltic state: Latvia went over the goal with 2,03%. Over the year 2019 the third Baltic state: Lithuania (2%) and Bulgaria (3,15%) reached the Wales goals or in total seven members.

The basic reason for their defence efforts is naturally the Russian threat. It must be underlined that this figure of Bulgaria was exceptional for only one year. This country did have a GDP share in 2018 (1,45%) and 2020 (1,60%), which was a lot lower than the 2019 figure. The NATO group of countries which are achieving the Wales goal of 2% GDP for military expenditures climbs to eleven countries in 2020. Poland reached back the 2% goal in 2020. But besides that, four new countries increase their military budget over the Wales agreed figure, namely: France, Norway, Romania and the Slovak republic. Under the presidency of Holland and the first years of Macron the French military expenditures was the subject of savings. France reached the lowest point over the years 2015-2017 (1,78 or 1,79%) and then increased the budget in question to a higher level in 2018 (1,81%), 2019 (1,83%) and the 2,04% in 2020. Comparing with the United Kingdom and knowing the fact that France is also a nuclear power the military budget was lower in Paris than in London.

Through it the year 2020 was the first in which the three nuclear NATO powers approved a defence budget with a higher level than the 2% GDP agreement. Norway was always a country, which was situated in the group 1, 50% - 1,99% GDP. The geographic location of this kingdom, the artic border with Russia and the challenges in the North Pole area are important reasons or the upgraded Norwegian military budget. The present NATO secretary-general is also a Norwegian citizen and a former Prime Minister in this Scandinavian country. For the Slovak republic and Romania it is the first time that these two countries reached the studied NATO goal. The Russian threat is also for these two east-European countries the main reason for an important increase of their military expenditures.

Table 1 also shows also an important group of NATO members are situated in the group under the 2% goal. Over the year 2020 this are seven countries, namely: Bulgaria, Croatia, Germany, Hungary, Montenegro, Portugal and Turkey. The countries which do have a GDP share close to the Wales goal are Turkey (1,86%), Hungary (1,85%), Croatia (1,83%) and Montenegro (1,82%). It seems

to be that these countries can join the 2% group which already achieved this NATO goal. The Islamic republic of Turkey increased the defence budget from 1,45% (2014) to the present figure. The Federal Republic of Germany evolved from a 1,19% share to the present 1,56% GDP percentage.

In the 1% - 1,50% group are ten countries situated with some striking countries. Indeed, the home base country of the NATO and SHAPE is located in Belgium and in 2020 this country climbed over the 1% GDP level (1,07%). All the years before this kingdom was in the 0,50% - 1% group. Canada was in the studied years always located between 1,01% (2014) and 1,42% (2020). Italy functioned between 1,14% (2014) and 1,39% (2020). A traditional navy country as the Netherlands was over these years always situated in this group: 1,15% (2014) till 1,49% (2020). But Holland is the country with the best budgetary connection to the upper group. The next table gives the evolution of the GDP shares in the best group with the year of creation (Table 3).

Based on this table the greatest GDP efforts are coming from Latvia and Lithuania. Comparing the years 2014 and 2020 all the eleven countries do spend more money on defence over these seven years.

Only the United States reaches the same level between these two years of the equation. Other remarkable climbers are Hungary (from 0,86% to 1,85%) and the Slovak republic (from 0,99% to 2%). Two countries have a lower GDP share concerning their defence expenditures, namely: Albania (1,35% in 2014 versus 1,29% in 2020) and Croatia (1,85% versus 1,83%).

The preceding text concerns the + 2% GDP group in the NATO. In the first line of Table 1, Luxembourg was the only country with a defence budget lower than 0,50% GDP. In 2020 the smallest Benelux country is the only member in the group (0,50 – 0,99%). With a population of nearly 550 thousand people this “Grand-Duchy” has an army of about 800 men. The mentioned group of the second line (0,50% - 0,99%) decreased from eight countries in 2014 till one with Luxembourg in 2020. In addition the group of members with a budget military effort between 1% and 1,50% GDP. This was the greatest group in 2014 with eleven countries and increased to 16 members and stayed the most extensive group up to and including 2019. The closest group to the Wales goal are the countries with a GDP share between 1,5% and 2%. For the upcoming period this group is the springboard to achieve the Wales summit goal of the 2% GDP defence expenditures..

Table 3: The evolution in the + 2% GDP group.

Countries	2014	2020	Since
United States	3,73%	3,73%	2014
United Kingdom	2,14%	2,32%	2014
Greece	2,22%	2,68%	2014
Poland	1,86%	2,31%	2015 and interruptions
Estonia	1,92%	2,33%	2015
Latvia	0,94%	2,27%	2018
Lithuania	0,76%	2,13%	2019
Norway	1,50%	2%	2020
France	1,86%	2,04%	2020
Slovak republic	1,29%	2%	2020
Romania	1,44%	2,07%	2020

The 20% Equipment Goal

The second part of the Wales agreement is the achievement of the 20% "NATO guideline on defence equipment expenditures". Also this rule is problematic for several countries. But in 2020 the NATO estimates that already 19 countries are in accordance with this goal. The next table gives the list of countries, which do comply with this investment objective (namely from the highest to the 20% goal, and for all the other countries their position divided in categories (Table 4).

This part of the Wales goals is easier to achieve with seven countries in accordance of this 20% rule already in 2014. It concerned: United Kingdom, Norway, Estonia, France and Luxembourg. The USA and Turkey were situated over the 25% investment for equipment.

France achieved this goal always and that means that all the three nuclear powers in the NATO were and are respecting this Wales agreement. Another remarkable country is Luxembourg with the last place in the mentioned list of the 2% GDP goal. In the following years the number of countries which were respecting this 20% rule always climbs with a striking increase over the last three years (2018-2020).

The following countries joined the + 20% investment group:

- 2015: Lithuania and Poland,
(Estonia was in the 10 - 15% group)
- 2016: Romania,
- 2017: Italy and Spain,
- 2018: Latvia and Slovak republic
(Italy fell back in the 15% - 20% group)
- 2019: Bulgaria, Hungary and the Netherlands.

In 2020 this goal of the Wales summit is reached by 14 of the 15 countries of 2019 (except. Bulgaria), namely: France, Hungary, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Romania, Slovak republic, Spain, Turkey, the U.K. and the USA. This group was in 2020 elaborated by Estonia and Italy (all two back again) with Denmark and Montenegro or 18 in total. Over the stated years several countries have spent more than 25% and even 30% and more from their defence budgets in equipment. The absolute record percentage was done by Bulgaria (2019: 62,1%), what was the only year that this country reached this goal.

Since 2018 Luxembourg spent between 50-52% of his military budget on equipment. The seven most important military budgets in this group of 18, which are in accordance with the Wales guideline of 20% investment in equipment, did have the following highest and lowest percentage over the year 2014 - 2020 (Table 5).

The lowest point is situated for all, except France, in the beginning years of this study. The highest percentage for equipment was for all, except Turkey, the past year 2020. If this study relates the geographic location on the world map of the NATO states with the Russian borders, then all these members have an investment budget of more than 20%. Bulgaria is the exception (2020: 19,2%).

In the closest group (15-20%) are five countries situated: Bulgaria, Canada, Germany, Czech republic and Portugal. Normally

countries can join, partly, over the next years the best group. Germany and Canada are not in conformation with this equipment goal. The FRG reached a percentage of 16,8% in 2020 which is the highest level for this greater NATO member. Canada also achieved his highest percentage (17,3%) in 2020. The lowest group (0 - 5%) started in 2014 with three countries: Belgium, Bulgaria and Slovenia. This last country is still in this group in 2020. Bulgaria made a remarkable evolution, which is already analysed in this study. Belgium, the home state for NATO and SCHAEPE started in 2014 (3,52%) over 6,52% to 10,15 (2018). The last two years this low country is situated concernign this goal around 10% - 11%.

Finally, based on the 2020 figures six countries are not directly in position to achieve the 20% equipment goal: Albania, Belgium, Croatia, Greece, North Macedonia and Slovenia. The Hellenic republic was one of the prestatated members for the global 2% GDP, but has a bad report for the investment goal.

The two goals

Like already said the Wales summit agreement demands to achieve the both goals by the member states in their national defence budgets at last in the year 2024! The next table gives an overview of the realization per goal and for both together (Table 6).

Table 4: The NATO equipment goal.

Year	0% - 4,99%	+ 5 - 10%	+ 10%	+ 15%	+ 20%
2014	3	8	8	3	7
2015	3	6	10	2	8
2016	3	7	6	4	9
2017	2	5	7	4	11
2018	1	3	9	4	12
2019	0	2	7	5	15
2020	1	0	5	5	18

Source: Own calculations based at the NATO yearly reports.

Table 5: Investment by main members.

Countries	Low	High
France	23,6% (2018)	26,5% (2020)
Italy	9,7% (2015)	24,6% (2020)
Netherlands	10,6% (2014)	26,1% (2020)
Spain	6,6% (2016)	23,2% (2020)
Turkey	25% (2014)	34,3% (2019)
UK	21,2% (2016)	23% (2020)
USA	25% (2016)	29,2% (2020)

Source: NATO yearly reports.

Table 6: The global realization.

Year	2% GDP Goal	20% Equipment Goal	Global
2014	3	5	2
2015	5	8	3
2016	4	9	2
2017	4	11	2
2018	6	12	4
2019	7	15	6
2020	11/29	18/29	10/29

Source: Own calculations based on the yearly NATO reports.

The figures in the first two rows are already analysed in this study. In the year 2014 were only two members in accordance with both goals: United Kingdom and United States. Both main NATO members have always achieved the Wales goals. In the year 2015 a third country: Poland, joined the two Atlantic powers. Poland would join again this group in 2018 with Latvia. In the year 2019 this group was extended with Bulgaria and Lithuania or in total six countries.

Bulgaria fell out of this group in 2020. But five new members joined the group: Estonia, France, Norway, Romania and the Slovak republic. With a rate of 10/29 in 2020 a third of the member countries have achieved both NATO goals. Greece has always met the GDP standard, but never the 20% investment rule. The Hellenic republic is the only NATO member in this situation.

On the other hand eight members of this military organization are conforming the 20% equipment goal, but not concerning the GDP rule: Denmark, Italy, Hungary, Luxembourg, Montenegro, the Netherlands, Spain and Turkey.

The global conclusion of the foregoing exercise is that only 10 of the 30 (29 studied) NATO members do conform to the NATO Wales summit goals. Since 2014 there is an important improvement. Based on the budget reality, it's easier to reach the investment goal than the 2% GDP rule. In the upcoming years it must be possible that additional countries will meet the Wales standards. The NATO yearly report classes the member states in graphs concerning their position in relation to the two studied goals of the Wales summit (Graph 1).

The next graph in the NATO yearly report 2020 places all the studied members with their actual situation concerning the two goals. With respect to the 2% GDP standard eleven members are in accordance with this goal. But between the median, which is 1,72%, and the 2% standard four countries are situated: Turkey, Hungary, Croatia and Montenegro. This second graph shows also the outstanding position of the United States. The median of the investment lays higher than the norm (23,08% vs. 20%). On this graph the position of the smallest member, Luxembourg, stands out (Graph 2).

The Atlantic

The third resolution of the "NATO Wales summit" concerns a better balance between the military expenditure of the North American and European NATO members. In other words the Wales summit demands an increase of the military budget outlays from most of the European partners.

The next table illustrates the situation of the year 2020 concerning the share in the alliance GDP and the share of NATO global defence expenditures. The NATO figures are calculated in constant prices and exchange rates. The comparing figures are the one of the year 2015, this was the first time that the annual report of the NATO Secretary-General mentioned this figures (Table 7).

Concerning this third part of the Wales agreement (point 14) the situation is still non-transparent and far from equality. Indeed, the USA is the main contributor with a defence share that lays about 20% higher than the US GDP share over the global NATO. Its not clear for the moment what the new US administration will demand from Europe over the next years in relation to an increase of the military financing coming from the national budgets.

Table 7: The American Burden (Figures 2020 and in parentheses 2015).

Countries	GDP Share In%	Defence Share In%
USA	53 (50)	71 (72)
Canada	4 (4)	2 (2)
Turkey	2 (2)	1 (1)
United Kingdom	7 (7)	6 (5)
EU states & others	34 (37)	20 (20)

Source: NATO reports 2015 & 2020.

Table 8: GDP vs. D.E.

Countries	GDP%	D.E.%
France	7%	5%
FRG	10%	5%
Italy	5%	2%
Netherlands	2%	1%
Poland	1%	1%
Spain	3%	1%

Source: NATO yearly report, 2020.

But the truth requires that the massive US defence budget is a tradition for the most important super power and an important part of this American military budget is related with areas outside the NATO territory (i.e., Asia).

Canada is spending a defence percentage, which is only the half of this North American country as share in the GDP of the NATO. The same situation is visible for Turkey. The difference between the two parameters is the smallest for the United Kingdom. The percentages of this European monarchy are indicating the increasing of defence efforts from London. In the European figures the two remarkable conclusions are the status quo concerning the defence expenditures between 2015 and 2020 as well as the descent of the share in the global NATO GDP. Anno 2020 the relationship between the two used parameters is as follows for the main European states (Table 8).

This table clearly shows the difference between the share in the NATO GDP and the defence expenditures. With regard to all countries listed, with exception of Poland, the GDP share lies higher than the D.E. concerning four countries this ratio is the half or even more with the lead from Germany (10% vs. 5%). France has the least deviation between these two parameters.

DISCUSSION AND CONCLUSION

This article has looked at trends in military spending inside the NATO member's military budgets and this during the period 2014-20 or the beginning of the Wales NATO summit. This study wants to examine what part of the guidelines of 2014 form this summit is already reached and the article is based on the primary figures of the NATO. The first conclusion is still that most of the NATO members decreased the personnel share in their defence budgets. Therefore the budgets do have more financial means for investments in equipment and other non-personnel related outlays.

The main part of this study concerns the Wales summit goals and the related achievements form the member states of the NATO. Over the studied period 2014-2020 the Wales summit goals are in an improving way. Indeed, already eleven countries reach the 2% GDP goal and its the expectation that more countries will reach

this guideline in the coming years. But, based at the present budget trends its the determination of this study that probably the half of the NATO states don't reach these decisions of 2014 at Cardiff in the year 2024. The second result concerning the equipment 20% budget goal is better with 18 countries which achieve this NATO rule. It seems to be that this goal will be reached by about 23 to 25 members against 2024.

The increasing of the defence budgets is certainly related with the states in the proximity of the Russian Federation. Concerning the more important members of the NATO (the big nine: USA, UK, FRG, France, Italy, Canada, Poland, Spain, the Netherlands and Turkey) are, with exception of Canada and Germany, conform to at least one of these goals. The defence of efforts of Canada have increased over the studied years, but still far away from the NATO goals concerning the GDP share. Canada was and is counting on the USA defence. Knowing the evolution in the North Pole area the defence challenges for the Canadian federation will certainly increase. Germany has certainly the financial means to increase the national defence expenditures. But an increasing role of Germany in the European/NATO defence that's like a red rag to a bull for several countries with the knowledge of the WW2 history.

The Atlantic burden changed over the last years to a lesser degree. This burden let also see the domination of the USA in the GDP and the defence expenditures. The achievement of the Wales guidelines is also related with the future of the NATO, because in this more insecure world a military alliance needs more financial means to reach the objectives [9]. This NATO 2030 report underlines the demand for more funding for the civil budget of the alliance: "Allies that make up a low proportional share of the civil budget should raise their national contributions. In the conclusion of this report, the results of the Wales agreement are assessed as positive: "Since 2014 NATO has implemented the biggest reinforcement of collective defence in a generation."

During the last years there were a lot of studies concerning the creation of a European defence system. At present more European

defence is only a realistic idea with the collaboration of the United Kingdom. But the recent Brexit doesn't favourite this idea. Also it's not clear if all the member states of the European Union are interested in this idea? A weak point for a European defence policy is the Nordic situation with Denmark (not a member of the European Defence Agency), Finland and Sweden (both neutral), Iceland and Norway (both not members of the EU). There can be no doubt about the fact that the European defence will have to rely on NATO and his North American input and this for the next decades. The past WW2 period (1945-2021 or more than 75 years) was a historic long time of peace for Western Europe and this fact is undoubtedly accomplished to a significant degree by the NATO.

REFERENCES

1. Annual Report of the NATO Secretary-General for 2020 - Rapport annuel du Secrétaire-Général de l'OTAN pour 2020, Brussels. 19 March 2021. 2020.
2. EDA (European Defence Agency), Defence data 2018-19: Key findings and analysis, Brussels. 2021.
3. EU Parliament. EU defence: The white book implementation process. Policy department for external relations. December 2018.
4. Hartley K. NATO at 70: A political economy perspective. York, Palgrave & McMillan. 2020.
5. Johnston S. How NATO adapts: Strategy and organization in the Atlantic alliance since 1950. Baltimore, John Hopkins University press. 2017.
6. Matthijs H. The NATO members and their military expenditures. J Def Manag. 2020;10(2):184-1-11.
7. NATO Press Release/Communication de presse de l'OTAN (PR 2021-030) concerning the defence expenditures of NATO Countries 2013-20 - Concernant les dépenses de défense des pays de l'OTAN 2013-20, Brussels, 16 March 2021.
8. NATO website concerning the Wales summit declaration of 5 September 2014. (Last updates on 30 August 2018).
9. NATO 2030: United for a new era. 25 November 2020.