

The NATO Members and Their Military Expenditures

Herman Matthijs*

Department of Public Administration & Management, Free University of Brussels (VUB), Belgium

ABSTRACT

This study examines the defence expenditures of NATO's member countries over the recent years. It makes use of the original budget figures of the states as verified by NATO (North Atlantic Treaty Organization) and published by this military organization. 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 (2010 – 2019);
- Which states already meet the targets of the 2014 Wales summit? (2% GDP for defence and 20% of this budget for investment)

The current figures are based on the primary budgetary sources as published by NATO, namely: the latest year report of 2019. The theme of this article is examined from different angles.

Keywords: Defence budgets; NATO; Military expenditures

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 Wales in 2014 [1].

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:

- Number of military personnel and their share in the budgets,
- The military expenditure of the members,
- The military budgets in budget figures,
- The defence expenditures per capita.

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 the past decade and compares the defence expenditures between 2010 and the year 2019. In 2010 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. Montenegro is mentioned in this article, if there are figures about the defence expenditures of this country. North Macedonia is a to recent member state of the NATO and is not mentioned further in this article [2].

MATERIALS AND METHODS

This study attempts to analyse and to compare the NATO defence figures over the last decade. The materials of this study are the figures in the NATO yearly report: in this case the one over the year 2019. The advantage of the use of this report is the harmonization of the numbers over all the members of the NATO. This yearly report is using the same method for the calculation of the defence figures, which are coming from the national defence budgets. Another remark is the fact that the outlays concerning the military pensions are also calculated in these figures. Because in some countries public budgets these pensions are sometimes in the military budget and in other state budgets related with the social security. Another additional comment is the fact that the military police 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 Netherlands (Koninklijke Marechaussee), France, Luxembourg and Romania (Gendarmerie), Italy (Carabiniere), Portugal (Guarda Nacional Republicana), Spain (Guardia Civil) and Turkey (Jandarma) [3].

Correspondence to: Herman Matthijs, Department of Public Administration & Management, Free University of Brussels (VUB), Belgium, Tel: +32 (2) 650 21 11; Fax: +32 (2) 650 35 95 E-mail: Herman.matthijs@skynet.be

Received: April 17, 2020, **Accepted:** July 17, 2020, **Published:** July 24, 2020

Citation: Matthijs H. The NATO Members and Their Military Expenditures. J Def Manag. 10: 183. doi: 10.35248/2161-0487.20.10.184

Copyright: © 2020 Matthijs H. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

The use of the NATO yearly report for this study can be justified for the following reasons:

- Are the original calculations and based at the national budgets which is a priority source in the kind of research?
- The harmonisation of the figures over the member states;
- The fact that this report with the figures is accepted by all the members.

RESULTS AND DISCUSSION

Next the study with an analyse of the figures in the NATO annual report 2019 concerning the military personnel related with the number of men and the share in the total defence expenditures. Another item of this study are the goals of the Wales summit of the NATO governments in 2014 and the relationship with the GDP. The third studied item is the financial size of the national defence budgets and their evolution over the last years. The fourth examined point is the relationship between the defence expenditures and the number of citizens in the member states [4].

Military Personnel

During this studied period 2010-19 ere is an important evolution to be noted in the number of military personnel. The fell back during the 2010-2019 period is as follows:

(NATO, 2019 Report)

- (2010) 3.572.000
- (2019) 3.259.000 (Estimations)

Facts and Figures

These figures are representing a decline of nearly 9.6% over the period. But the lowest point was reached in 2016 (3.090.000 men). Over the last years the number of military personnel is back increasing. Comparing with the deepest point in 2016 the number of military personnel is going up with 5.4% if we take as arrival point the numbers of 2019. But the total amount was in 2010 still higher ten at the end of the decade. In the following countries the military personnel is going up since 2016: Canada, Croatia, Czech Republic, Denmark, Estonia, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Romania, the UK and the USA or in 18 of the NATO members. The decrease is particularly noticeable in the larger NATO member states, as can be seen in the next table over the period 2010 - 2019 (Table 1).

These figures indicate a fall in military personnel in all the greater countries with exception of Canada and Poland. The decline goes from 7% to 22%! Remarkable is the fact that the UK has the smallest army in Europa and that Germany and Italy roughly have the same number of military personnel. The French republic has the largest EU army within the NATO. Here though it should be pointed out that the decline in troop numbers in France also has to do with the professionalization of the army and the ending of military service. Only Canada and Poland have more personnel in 2019 than in the beginning of the decade. Next to the two quoted states there are six smaller members were the total of military personnel went up in the past decade, namely: Czech republic, Hungary, Latvia, Lithuania, Norway and Romania.

The next table looks at the evolution of military personnel numbers on the two sides of the Atlantic between 2010 and 2019 (Table 2).

This second table shows that in total the European countries still have more troops than the two North American members of the alliance. The cutbacks over the recent years in Europe were related with the budgetary restructuring of the public finances. This was lesser the case in North America. Since 2016, the year with the lowest member of military personnel, the European share is slowly increasing. With 30 members the NATO has a great group of states with small armed forces (2019 estimations by NATO): Iceland (none), North Macedonia (not known), Luxembourg, (900 men), Montenegro is a member since 2017 (1500), Estonia (6300), Latvia (6400), Slovenia (6.300), Albania (6800) Slovak republic (11700), Lithuania (15700), Croatia (15100), Denmark (18000), Hungary (19700), Norway (20700), Bulgaria (24800), Czech republic (25000) and Belgium (25900). All the other member states have more than 30.000 men in military service. This mentioned figures over those states are indicating the great number of little armies inside the NATO. A lot of them are located in the border region of the Russian Federation. Their security and defence is completely independent of the NATO support.

Percentage/Share

The following table gives an overview of the percentage expenditure on military personnel (not including Iceland) in the national defence budgets. Conform the NATO definition the personnel expenditures concerns military, civilian (i.e., Gendarmerie) outlays as well the military pensions.

The ranking in this table is from the highest share (in 2019) to the lowest one concerning this item. This coming third table contains a comparison between the years 2010 and the 2019 (Table 3).

When the percentage of personnel spending is grouped by size, this study results in the following differences for the year 2019:

- Countries spending < 40% on personnel: 7 countries (was 2 in 2010),
- Countries spending 40 - 49% on personnel: 1 0

Table 1: Military personnel (2010 - 2019).

Countries	2010	2019	-/+
Canada	61.000	69.000	+ 13%
France	234.000	207.000	- 13%
Germany	235.000	182.000	- 22%
Italy	193.000	178.000	- 7%
Poland	100.000	118.000	+ 18%
Spain	131.000	121.000	- 8%
Turkey	495.000	435.000	- 12%
UK	198.000	153.000	- 22%
USA	1.427.000	1.338.000	- 6%

Table 2: Evolution (2010 - 2019).

Countries	2010		2016		2019
Europe	2.084.000	(58.3%)	1.718.000	(55.5%)	1.851.500 (56.8%)
North America	1.488.000	(41.7%)	1.372.000	(44.5%)	1.407.500 (43.2%)
Total	3.572.000		3.090.000		3.259.000

Table 3: Distribution of personnel expenditures (without: Iceland & North Macedonia).

Countries	2019	2010
1. Greece	76%	(65%)
2. Croatia	72%	(71%)
3. Portugal	69%	(70%)
4. Belgium	68%	(75%)
5. Slovenia	68%	(70%)
6. Italy	65%	(75%)
7. Albania	64%	(75%)
8. Montenegro	64%	(73%)
9. Spain	60%	(63%)
10. Romania	54%	(62%)
11. Czech Republic	53%	(50%)
12. Canada	49%	(45%)
13. Poland	48%	(56%)
14. Denmark	48%	(50%)
15. Turkey	46%	(49%)
16. The Netherlands	45%	(52%)
17. France	45%	(47%)
18. FR Germany	44%	(52%)
19. Lithuania	42%	(65%)
20. Hungary	41%	(56%)
21. Slovak Republic	40%	(79%)
22. USA	38%	(46%)
23. Estonia	35%	(34%)
24. Latvia	34%	(55%)
25. Norway	34%	(42%)
26. UK	34%	(36%)
27. Luxembourg	30%	(45%)
28. Bulgaria	28%	(64%)

countries (was 6 in 2010),

- Countries spending 50 – 59% on personnel: 2 countries (was 7 in 2010),
- Countries spending 60 – 69% on personnel: 7 countries (was 7 in 2010),
- Countries spending > 70% on personnel: 2 countries (was 6 in 2010).

Based on this third table the share of the personnel expenditures are decreasing in the period 2010 – 2019. That is proven by the fact that there are now 17 member states (was 8 in 2010) which are spending less than 50% of their military budget on personnel. Comparing with 2010, when there were 20 countries with more than a 50% share concerning their personal costs, is this decreased until still 11 countries. Over the last years the compositions of these groups was also the subject of changing. Indeed, the members in the plus 70% group decreased from 6 to 2 members etc. The global evolution is that the share of personnel costs in the military budgets is going down. The reasons therefore are double and sometimes the result of combined factors. First of all, less personnel through more pensions then recruitments and this last groups of new/younger soldiers are cheaper in salaries. A second reason is the fact that a lot of member states have increased their global defence budget (infra).

There are already seven states under the level of 40%, Luxembourg is pointed at 30% and Bulgaria is the first state under the border with a personnel share of 28% ! But this east European state has increased enormous his defence budget. Greece and Croatia are the only countries in which the personnel costs went up. In all the other states the personnel share decreased with sometimes with spectacular results, like: Slovak republic (from 79% to 40% or minus 39%), Bulgaria (from 64% to 28% or minus 36%), Lithuania (from 65% to 42% or minus 23%) and Latvia (from 55% to 34% or minus 21%) (Table 4).

Generally, the conclusion concerning the personal cost is that the NATO members are, over the studied period, progressively improving to achieve the goal.

Military expenditures and GDP

The second chapter in this article is the study of the defence expenditures in relation as a percentage of the GDP (Gross Domestic Product) of the NATO member states. The next table concerns the period 2010- 2019 (NATO, yearly report 2019). The countries are arranged in alphabetical order. There are no NATO figures concerning the republics of Iceland and Northern Macedonia, this facts is already explained (Table 5).

This article tries to relate the percentages in the above table in the light of the “NATO Wales summit” (held outside Cardiff in

Table 4: GDP evolution (Share of real GDP).

Countries	2010	2019
Albania	1.56%	1.26%
Belgium	1.08%	0.93%
Bulgaria	1.64%	3.25%
Canada	1.16%	1.31%
Croatia	1.54%	1.68%
Czech Republic	1.28%	1.19%
Denmark	1.40%	1.32%
Estonia	1.70%	2.14%
France	1.96%	1.84%
Germany	1.35%	1.38%
Greece	2.64%	2.28%
Hungary	1.03%	1.21%
Italy	1.35%	1.22%
Latvia	1.06%	2.01%
Lithuania	0.88%	2.03%
Luxembourg	0.47%	0.55%
Montenegro	1.80%	1.61%
The Netherlands	1.34%	1.36%
Norway	1.51%	1.80%
Poland	1.77%	2.00%
Portugal	1.49%	1.52%
Romania	1.24%	2.04%
Slovak Republic	1.27%	1.74%
Slovenia	1.61%	1.04%
Spain	1.03%	0.92%
Turkey	1.83%	1.89%
United Kingdom	2.47%	2.14%
United States	4.81%	3.42%

Table 5: The NATO Equipment Goal.

Countries	Percentage
Bulgaria	58%
Luxembourg	45%
Slovak Republic	41%
Turkey	38%
Lithuania	30%
Norway	29%
USA	27%
Romania	25%
France, Poland & Latvia	24%
Hungary & Italy	23%
The Netherlands & UK	22%
Spain	20%

2014) taken guidelines. At this summit, the leaders of the former 28 NATO countries, made the following decisions/guidelines to reach against the year 2024 or in a period of ten years. At present nearly 2/3 of the period is over and that's also the moment to make a first analyse of the presented goals:

The defence budget must return to at least 2% of the national GDP;

- The investment part of defence budgets must rise to 20% of the expenditure;
- A more balanced sharing of the costs of providing defence and security between both sides of the Atlantic.

The 2% GDP guideline

With respect to the 2% of GDP decision, nine countries have reached this target in 2019, namely: the United States, Greece, the United Kingdom, Estonia, Latvia, Lithuania, Bulgaria, Romania and Poland. At the moment of the Wales decision in 2014 only three members reaches this 2% GDP goal, namely: Greece, the UK and the USA. In total of countries there is an evident improvement by the NATO states. The nearest followers of the 2% GDP guideline are the trio: France, Norway and Turkey (all three over the 1, 80%).

The average of the NATO defence expenditures. as share of the GDP. is as follow:

- NATO- EU States (21 at 27): 1.38% (2010) ~ 1.60% (2019)
- United Kingdom: 2, 47% (2010) ~ 2, 14% (2019)
- Canada: 1, 16% (2010) ~ 1, 31% (2019)
- USA: 4.81% (2010) ~ 3.42% (2019)
- NATO total: 3.03% (2010) ~ 2.52% (2019)

Since the President Macron years in France the military budget is increasing, but the situation of the French public finances is still far from good. This country went from a share of 1.98% GDP in 2010 to 1, 82% in 2014 and 1, 84% in 2019. President Macron has always said that his country will reach the goal of 2% GDP in 2024. On the other side has France still a nuclear capacity and worldwide interests! But there is still an important difference in military spending between this republic and the other European nuclear power: the United Kingdom. This nearly ex - EU member went from 2.47% (2010) over 2, 16% (2014) to 2, 14% (2019). The FR of Germany went from 1.35% (2010) over 1, 18% (2014) to

1.38% (2019). This country has certainly the budget possibilities to invest more in defence. It's also the only of the EU greater states with an increasing defence budget in the last decade. But it's still far away from the NATO goal and a leading role of Germany in the European defence, is a political problem for a lot of European countries. The reason is related with the world wars and the German occupation of a lot of European states during this war periods. The fourth European military power: Italy evaluated from 1, 35% (2010) over 1.14% (2014) to 1.22% (2019). But this southern European state remains a lot below the average and the 2% GDP rule. Also Spain has still a weak defence share; 1.03% (2010), 0, 92% (2014) and 0, 92% (2019).

Only Germany has a greater share in 2019 than in 2010. This FRG and Italy are the only two with a visible growth in the GDP share between 2014 and 2019. The three other states do have a more or less status quo in their share. The United Kingdom is the only country, which did and do have a share upstairs the 2% GDP.

Countries near to the Russian or Serbian borders have increased their military budget. The Baltic states are already conform the NATO guideline of 2014 and this is also the fact for Poland, Bulgaria and Romania.

If we take the NATO average of 2019 with 2.52% GDP spending, only the USA spends more on defence. If we take the calculation average of the European Union members (= 1, 60%), then 10 states of the 21 EU states in the NATO are spending more than the EU average of 1, 60%. This result is certainly improved over the last few years. But only seven states have an average in conformation with the NATO guidelines. It are the Border States with the Russian Federation which are spending the most on defence and respecting the NATO goals. Three countries are below the 1% GDP on defence: Belgium, Luxembourg and Spain. This is the smaller group as in 2014 with nine countries. In 2010 only Luxembourg and Lithuania were below the 2% GDP. Since than this Baltic state upgraded its defence budget enormous. Belgium, as home state of the NATO institutions, and Spain went under this level of 1% GDP spending.

The next item of this research is the evolution of the achievement of this NATO goal of 2% GDP over the members (without Iceland, and also without Montenegro in 2010 and 2014):

- Countries more than 2% GDP: 9 (was 3 in 2010 & 2014)
- Countries between 1, 50% & 2%: 6 (was 8 in 2010 and 6 in 2014)
- Countries between 1% & 1, 50%: 10 (was 14 in 2010 and 9 in 2014)
- Countries under the 1% GDP 3 (was 2 in 2010 and 9 in 2014)

The conclusion concerning the 2% GDP goal is that the situation is improving and that more and more countries have achieved the goal. There is an evident decreasing of the number of states in the lowest group and an increase of the states in the plus 2% GDP group. In the year 2019 it's the first time that a majority of members goes over the 1.50% share ! (15 against 13)

Another numerical and statistical comparison is the median of the GDP shares.(NATO, 2019 report, p. 41). The median of the defence expenditures as a share of the GDP is estimated at 1, 67% for the year 2019. Also this figure is increasing since 2015 and

is reached by 14 of the 28 states (excluded: Iceland & Northern Macedonia). The fact that the NATO average (2019: 2.52%) is more than the guideline of 2%, is – first of all – explained by the higher defence budget of the United States of America and also through the situation that already eight other members are over the 2% goal.

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 2019 the NATO (NATO, 2019 report, p. 124) estimates that already 16 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) (Table 5).

This means that 16 members or a majority of the countries are in conformation with this guideline. In 2014 only seven states reached this 20% equipment rule, namely: Estonia, France, Luxembourg, Norway, Turkey, the UK and the USA. Estonia (infra) is over the year 2019 not anymore in this group; the six others are still in and have the party of ten new states in this list. The nearest followers are Denmark (18%), Estonia (17%) and Germany (16%). Over the last years we conclude an important improvement in relationship with the mentioned guideline.

The calculation average is 22, 79% and the median amounts 21, 53% for the year 2019. These figures are indicating that this goal is easier to achieve for the members than the 2% GDP global norm. The following figures are proving this and giving the differences between 2014 and the year 2019.

- More than 20%: 16 countries (2019) ~ 7 (2014)
- Between 15% - 20%: 3 ~ 3 (2014)
- Between 10% - 15%: 7 ~ 7 (2014)

- Under 10%: 2 ~ 10 (2014)

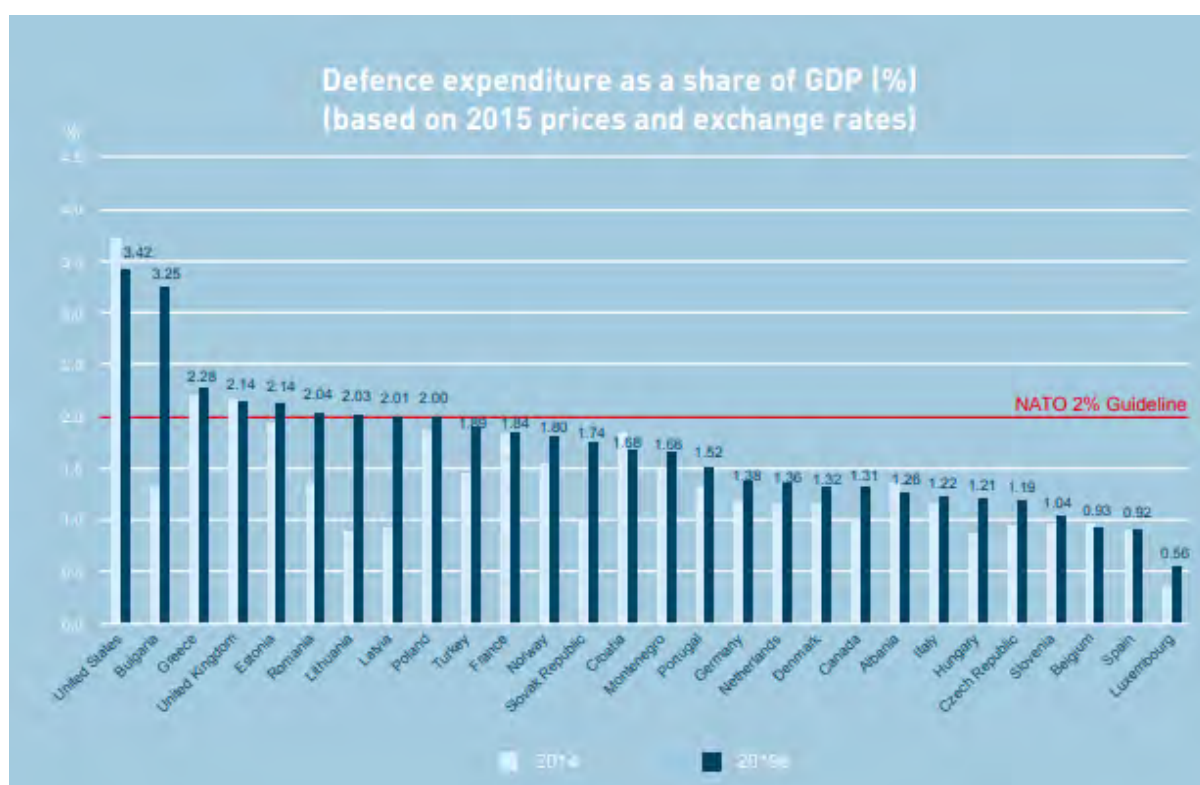
Croatia (6%) and Slovenia (7%) are the only two countries in the ‘under 10%’ group. Remarkable is that four of the five greater West-European states have reached this goal: France, Italy, Spain and the United Kingdom. Only the Federal Republic Germany is below this goal reaches only 16% for this NATO goal.

The figures given above can be used to class the NATO membership into four distinct groups for the year 2019 namely:

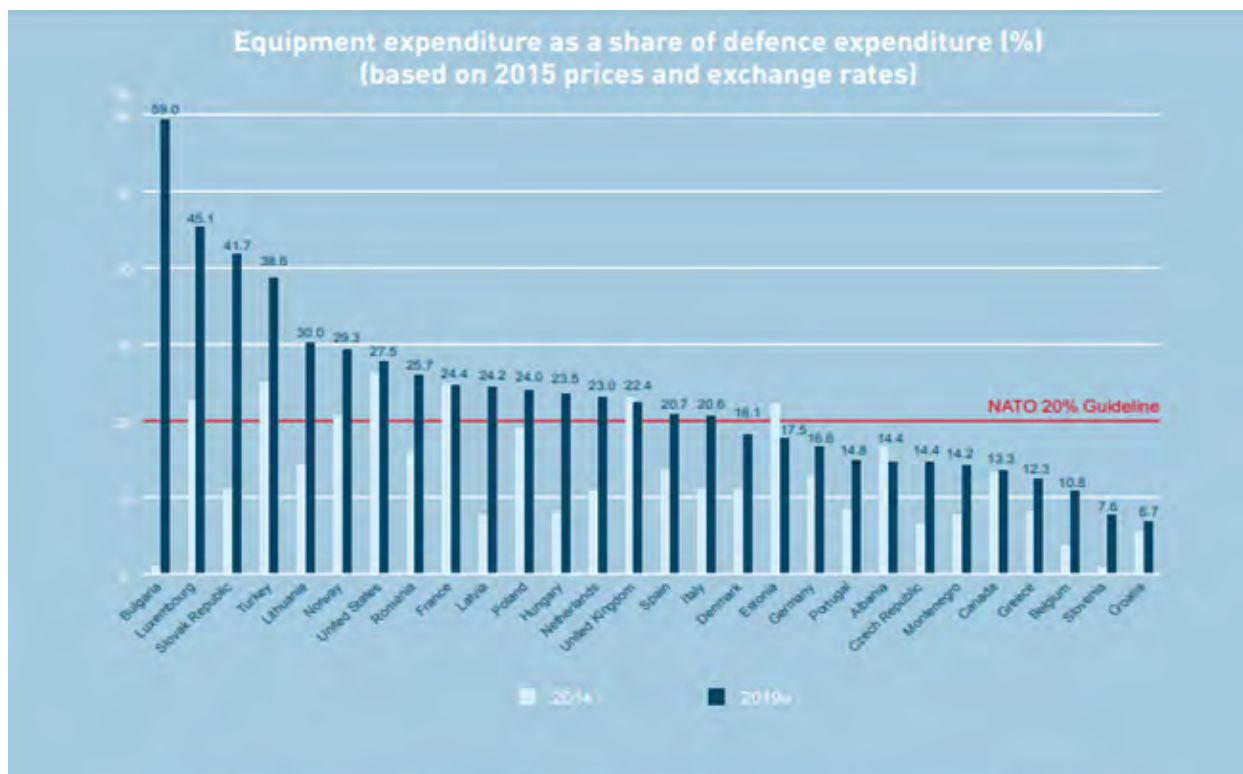
- 7 countries which meet the 2% of GDP standard and the 20% investment standard: the USA, the United Kingdom, Poland, Romania, Bulgaria, Latvia and Lithuania;
- 2 countries which meet the 2% of GDP standard but do not reach the 20% investment standard: Estonia and Greece. Indeed the Hellenic republic has a global military budget of 2, 28% GDP, but 76% is going to personnel and only 12% to equipment ;
- 9 countries which do not meet the 2% of GDP standard, but do meet the 20% investment standard: France, Hungary, Italy, Luxembourg, Netherlands, Norway, Slovak republic, Spain and Turkey;
- 10 countries - excluded Iceland & Northern Macedonia - which do not meet either standard: Albania, Belgium, Canada, Croatia, Czech republic, Denmark, FRG, Montenegro, Portugal and Slovenia.

The conclusion of the foregoing exercise is that a majority of NATO members still do not conform to the above two standards. But there is a significant improvement over the studied years. Based on the budget reality, it's easier to reach the investment goal than the global 2% GDP norm.

The next graphs are indicating the figures described above. There



Graph 1: Defence expenditures as share GDP in the NATO countries (2% GDP goal).



Graph 2: Equipment expenditures (20% Defence budget goal).



Graph 3: The two goals together.

all three part of the NATO annual report 2019 (pp. 42 & 43) (Graphs 1-3).

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 2019 concerning the share in the alliance GDP and the share of NATO global defence expenditures. (NATO, annual report 2019, p. 39). The NATO figures are calculated in constant 2015 prices. 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 (NATO, Yearly Report 2015) (Table 6).

With respect to the GDP share of the European states Germany leads this list with 10% (was 9% in 2015) followed by the UK 7% (was 8%), France 7% (7%), Italy 6% (5%) etc. The remaining amount of 12% is divided over all the other European members of the NATO. In the case of the defence share of 27% the most important spenders are: the UK 6% (was 7% in 2015), France 5% (was 5%), the FRG 5% (was 4%), Italy 2% (was 2%) and nine percent over all the other members.

Based on this figures this article has to conclude that there are still enormous differences between this shares (defence minus GDP) and the countries.

- USA: + 18% (was + 22% in 2015)
- UK and Turkey: - 1% (was also - 1% in 2015)
- Canada & France: - 2% (was for each minus 2% in 2015)
- Italy: - 4% (was minus 3%)
- FRG: - 5% (was also minus 5% in 2015)
- All European members: - 15% (was minus 19% in 2015)

The GDP of the NATO evolved in the period 2010 - 2019 as follows (NATO, Annual Report 2019,

- 2010: 33.142 billion dollars;
- 2015: 36.058 billion dollars;
- 2019: 39.243 billion dollars.

In this decade there is a GDP increase of 18.4%. Over the recent period 2015-2019 the growth is 8.8% over all the NATO members but with enormous differences between the countries.

The next table gives an overview of the GDP growth between 2015 and 2019 (Table 7). Source: NATO yearly report 2019 and own calculations.

This list indicates the differences in GDP growth between the members going from Italy with 3.8% over these five years (2015-19) till Montenegro with a 25% GDP increase. Comparing with the NATO average of 8.8% over these calculated years, it results in 19 of the 29 members (except Northern Macedonia), which did have a GDP growth higher than the average. Even there is a split in the group of the greater - more important members of the NATO. Indeed, five countries have a higher growth than the average: Poland, the Netherlands, Spain, Turkey and the USA. The lower group exists also of five states: Canada, France, FRG, Italy and the United Kingdom. The increase of the GDP growth is more visible in the newest NATO states, which are situated in the east European area.

The conclusion for the third part of the Wales summit goals is that the differences between 2015 and 2019 over the both Atlantic sides are smaller. The reason is twofold. First of all the increase of

Table 6: The American Burden (figures 2019 and in parentheses 2015).

Countries	GDP share in%	Defence share in%
USA	52 (50)	70 (72)
Canada	4 (4)	2 (2)
Turkey	2 (2)	1 (1)
European members	42 (44)	27 (25)

Table 7: The GDP growth 2015-2019.

NATO average	8.8%
Albania	18.1%
Belgium	5.9%
Bulgaria	16.1%
Canada	7.3%
Croatia	12.1%
Czech rep	12.8%
Denmark	8.2%
Estonia	17.2%
France	6.4%
FRG	6.9%
Greece	5.1%
Hungary	20.0%
Iceland	17.6%
Italy	3.8%
Latvia	14.8%
Lithuania	11.9%
Luxembourg	8.7%
Montenegro	25.0%
The Netherlands	9.8%
Norway	6.4%
Poland	18.2%
Portugal	9.0%
Romania	20.2%
Slovak rep	14.7%
Slovenia	16.2%
Spain	11.4%
Turkey	10.6%
UK	6.3%
USA	9.7%

the USA share in the NATO-GDP with 2 percent and, secondly, the increase of the EU defence expenditures with 2%. With the status quo situation of Canada and Turkey there is four percent difference between the European and US shares in relation to the GDP and defence expenditures.

Military budgets

Over the period 2014, the start of the NATO summit guidelines, and the year 2019 the defence budgets in all the member states were increasing. But the differences in increase are enormous between the countries. Still the most important military budget inside the NATO. The eight table of this study gives the defence expenditures (year 2019), in nominal figures and expressed in US dollars, starting from the highest budget with the comparing figures of the year 2014 and the percentage of increase over this period (Table 8).

In this period the average growth of all the defence budgets was 8.4%. This percentage is based at the total of all the budgets:

- 2019: 987 billion US dollar
- 2014: 910 billion.

Only four countries are below this percentage: Belgium Croatia, the UK and the USA. But the United States has still the most important budget with a share of nearly 70% of the total amount. In importance this budget is followed, far away, through the United

Table 8: The military budgets of the members (Billion/Million US dollars).

USA	685 billion US dollars (660) or 3.8%
UK	66 billion US dollar (61.2) or 7.7%
FRG	49.7 (39.3) or 26.5%
France	47.7 (43.9) or 8.8%
Italy	23.1 (20.7) or 12%
Canada	21.8 (15.5) or 40.5%
Turkey	18 (11.7) or 52.7%
Spain	12.3 (11.7) 16.4%
The Netherlands	11.4 (8.6) or 32%
Poland	11.3 (8.5) or 32.7%
Norway	7.4 (5.8) or 26.5%
Greece	4.7 (4.3) or 8.5%
Belgium	4.5 (4.3) or 2.5%
Romania	4.3 (2.3) or 89%
Denmark	4.3 (3.4) or 27.4%
Portugal	3.3 (2.5) or 29.1%
Czech Republic	2.5 (1.6) or 48.9%
Bulgaria	1.8 (0.6) or 193%
Slovak Republic	1.7 (0.8) or 110%
Hungary	1.7 (1.0) or 69%
Lithuania	957 million (358) or 167%
Croatia	934 (892) or 4.7%
Latvia	622 million (245) or 153%
Estonia	569 million (432) or 31.5%
Slovenia	525 million (411) or 28%
Luxembourg	348 million (210) or 65.6%
Albania	166 million (150) or 10.7%
Montenegro	78 (59) or 33%
	~
	~

Kingdom and then Germany. It's the first time in history, after the start of the NATO, that the military budget of the FRG is more important in size than the French military budget. This will give at least that will certainly cause tensions between Berlin and Paris

It's also important to know what the money-value should be of the addition of the 21 European Union members in the NATO.

- **21 EU members:** 188 billion US dollar or 27% of the US budget
- **With the UK:** 254 billion US dollar or 37% of the US budget

In other words a real support pillar from the EU in the NATO defence is not only a political problem between the countries. But the budget resources are not on the table! Meanwhile the 'Brexit' underlines also the importance of the UK in the building of an European defence system. Also the differences in the defence budget between the United Kingdom versus the FRG and France catches the eye. That underlines again the importance of the UK defence for Europe. Finally, the 2% percent Wales application at the 21 EU members. With a GDP of 13.095 billion US dollar (NATO, annual report 2019, p. 121) the achieving of this 2% goal demands from the EU (21 members: without the UK, Austria, Cyprus, Ireland,

Finland, Malta and Sweden) a joint defence budget of 261 billion US dollar. That's 73 billion more than the present sum of all the 21 military budgets. Like already mentioned only the three Baltic States, Bulgaria, Greece, Poland and Romania have reached this NATO goal.

Defence expenditure per capita

This article has also the intention to link the foregoing to per capita defence spending. Doing so yields a different perspective on NATO's military expenditure.

The next table gives an overview of per capita defence spending in each of the NATO's member states and the GDP per capita. The figures concern the year 2019 (estimated NATO figures) with (in parentheses) the figures of 2015, the latest year mentioned in the NATO document used. In other words this table gives in US dollar the defence expenditures and the GDP per capita calculated in 2015 prices and exchange rates. (NATO, Annual report 2019, p. 122) The countries are ranking in this list from the highest capita to the lowest with the year 2019 as indicator (Table 9).

This table let see that the GDP per capita was going up over these mentioned years (2015-2019) in all the countries, except the DE/capita for Iceland and both the figures for the newest member state: Northern Macedonia.

The NATO averages are the following in US dollar:

- **D.E. per capita** 1.048 (971) or plus 7.9%
- **GDP per capita:** 41.700 (39.100) or plus 6.6%

The D.E. per capita is going up in most of the countries with more than the NATO average over the mentioned years. Only in the following five countries there is a growth less than the average: USA (3.8%), Belgium (4.8%), Greece (5.7%), Poland (6.8%) and the UK (7.7%). All the other states have a higher increase DE per capita than the NATO average. The most obvious increases are: Bulgaria (304%), Lithuania (213%), Latvia (288%) and then the Slovak republic with 77%. This underlines again the defence efforts, over the last years, of the Border States with the Russian Federation. Based on the figures in this table we can again conclude the enormous efforts from this east European state concerning the increase of his military budget comparing with the NATO average only two countries have a greater amount per capita: USA and Norway. This was also the fact in the year 2015. This can be explained as result of the high military budget in the USA and the high GDP of the Norwegian Kingdom. In this ranking the European differences are again visible between the UK and France. This last republic scores better, per capita, than the FRG. The difference between the USA with 2.072 dollar DE per capita versus the lowest: Albania with 58 dollar, is a ratio of X 35, 7 !

The places of the NATO members in this ranking are mostly the same as in 2015. There is an exchange of places between the FRG and Canada. That can be explained through the higher GDP growth in Germany and the increasing defence budget in the federal republic. Remarkable is the ninth place of the little Grand Duchy, a country with an exceptional high GDP. Greece has a defence budget of more than 2% of the national GDP and that results in this tenth place of the DE ranking list. But it's Bulgaria that springs from place 26 to 19 as result of the enormous budget efforts in favour of his defence.

Table 9: Defence expenditure (D.E) and GDP per capita (in US dollars).

S. No	Countries	D.E. per capita	GDP per capita
1.	United States	2.072 (1.196)	60.500 (56.700)
2.	Norway	1.384 (1.183)	76.800 (74.500)
3.	United Kingdom	985 (914)	46.000 (44.500)
4.	Denmark	742 (592)	56.200 (53.300)
5.	France	710 (653)	38.600 (36.600)
6.	The Netherlands	658 (512)	48.400 (45.200)
7.	FRG	597 (487)	43.400 (41.400)
8.	Canada	585 (521)	44.700 (43.400)
9.	Luxembourg	558 (438)	99.700 (100.400)
10.	Greece	441 (417)	19.300 (18.100)
11.	Estonia	430 (355)	20.100 (17.400)
12.	Belgium	392 (374)	42.100 (40.600)
13.	Italy	385 (322)	31.400 (30.100)
14.	Lithuania	346 (162)	16.600 (14.300)
15.	Latvia	325 (142)	16.200 (13.600)
16.	Portugal.	323 (255)	21.200 (19.300)
17.	Slovak Republic	322 (182)	18.400 (16.200)
18.	Poland	295 (276)	14.700 (12.400)
19.	Bulgaria	268 (88)	8.200 (7.000)
20.	Spain	264 (239)	28.500 (25.800)
21.	Slovenia	253 (194)	24.300 (20.900)
22.	Czech Republic	236 (182)	19.800 (17.700)
23.	Croatia	229 (210)	13.600 (11.800)
24.	Romania	225 (230)	11.000 (9.000)
25.	Turkey	222 (154)	11.700 (11.100)
26.	Hungary	178 (116)	14.700 (12.500)
27.	Montenegro	127 (91)	7.600 (6.500)
28.	Albania	58 (46)	4.600 (4.100)
29.	Iceland	n.a.	58.700 (52.600)

Concerning the second part of the table, the GDP per capita, there is only one country with a lower figure ten in 2015: Luxembourg. But this little Grand Duchy has still - by far - the highest GDP per capita. The increase of the GDP per capita goes from minus 0.7% (Luxembourg) over 3% (Norway & Canada) ... to 22% (Romania). With a NATO average of 6.6% growth over the examined period, ten countries have a lower increase. Greece has the average and 17 countries do have a higher increase. The average amount is 41.700 US dollar per capita in 2019 and that gives the following distribution across the members: 10 with a higher (including Iceland and from high to low: Luxembourg, Norway, USA, Denmark, Netherlands, the UK, Canada, the FRG and Belgium. But the majority of the members have a lower GDP per capita than the average. Based on this GDP per capita figures the conclusion is still that the wealthiest countries are situated in North America and Western Europe. Also this figure proves the prosperity gap between southern countries (France, Spain and Italy) and the Western/Northern part of the NATO.

The difference between Luxembourg with a GDP per capita of 99.700 US dollar and Albania with 4.600 dollar is a ratio of X 21.6 ! That ratio is lower than the DE per capita.

Six members did have a higher increase of the GDP per capita than the DE per capita. It concerns: the USA (6.7% vs. 3.8%),

Greece (6.6% vs. 5.7%), Belgium (5.1% vs. 4.8%), Croatia (15% vs. 9%), Poland (18.5% vs. 6.8%) and Turkey (5.4% vs. 4.4%). It's important to underline the fact that in some of these countries (USA, Greece and Poland) the 2% GDP goal is already achieved for years.

Spain is the only country with similar percentages (10.4% vs. 10.4%). These percentages are proving again the low defence expenditures of Belgium and Spain. In 21 countries the increase of the DE per capita was higher than the GDP per capita with the following differences between the more important members of the NATO:

The Netherlands (22.5% increase DE per capita vs. 7% GDP per capita):

- The FRG (22.5% vs. 4.8%)
- Italy (19.5% vs. 4.3%)
- Norway (16.4% vs. 3%)
- Canada (14.2% vs. 3%)
- France (8.7% vs. 5.4%)
- United Kingdom: (7.7% vs. 3.3%).

The most important European partners did have all a higher increase in their DE per capita versus the GDP growth per capita.

Table 10: Most important countries (2019).

S. No	DE	GDP
1.	USA	Luxembourg
2.	Norway	Norway
3.	UK	USA
4.	Denmark	Iceland
5.	France	Denmark
6.	The Netherlands	The Netherlands
7.	FRG	UK
8.	Canada	Canada
9.	Luxembourg	FRG
10.	Greece	Belgium

This figure proves again the budget efforts of the European states for defence and the financial catch-up operation of these countries because only the UK have already reached the 2% GDP – NATO goal. The members, who reached in the present period this guideline, do know enormous differences between the two ratios.

Bulgaria (304% DE per capita growth versus 11.7% GDP per capita increase) Romania (73% vs. 22.2%), Latvia (288% vs. 16%) and Lithuania (213% vs. 19%). Estonia was already in an earlier stage in accordance with the NATO 2% GDP goal, for tis Baltic country the ratio between the two parameters is (21.2% vs. 15.5%).

Concerning this GDP per capita in the NATO states only eleven members do have a higher result as the average in 2019. It concerns: the two North American members, the three Scandinavian members, the three Benelux members, France, Germany and the United Kingdom. This table doesn't let see a difference, in this case, with the results of 2012. Even in the NATO GDP figures we conclude the already existing welfare conditions between Western Europe versus East & South Europe.

The second part of the above table concerns the defence expenditures (D.E.) per capita between the years 2012 and 2019 (except Iceland). In only three states, the USA – Belgium and Italy - the “D.E.” per capita is in 2019 lower than in 2012. This is an improvement with the former years and confirms de previous figures concerning the increase of the military budgets.

The last table concerns the top ten ranking of the countries, situation 2019, in both parameters (Table 10). The republic of Iceland is an exception in this table with only a GDP ranking, but with a high position in this list as result of the higher standard of living at this island. In the per capita lists we do find nearly all the same countries in the two parts of the table with three exceptions, namely: Belgium, France and Greece. Belgium ends at number 12 in the DE per capita list and is a very low spender with 0.92% GDP on defence. But in the GDP per capita part of the list, this West European kingdom occupies the tenth place. France ends fifth in the DE ranking, but is missing the GDP per capita top list with place eleven. As already said, The Hellenic republic is an important military spender. But this study already pointed the problematic economic situation of this country. This remark explains the 18th place of Greece in the GDP per capita ranking.

This yearly NATO report publishes harmonizes figures about some aspects of the military expenditures. Based at this report we can't make an opinion concerning the effectiveness of the armies or at the correlation between the level of spending and the ability to fight strategically or tactically. In the past years a new kind of war

is born; namely the cyber warfare. Also about this item the NATO yearly report has no information. Therefore a request to the NATO administration to publish in upcoming reports, also figures which pay attention to other topics than the manpower and the Wales summit goals.

CONCLUSION AND FUTURE PROSPECTS

This article has looked at trends in military spending inside the NATO member's military budgets and this during the last decade. The first conclusion is still that the US continues to be by far the largest financier of the NATO and is still the greatest military spender. The explanation basically lays with the funding parameters namely the level of the “GDP” and the military tradition.

The Wales summit goals are in an improving way. Already nine countries reach the 2% GDP goal. But there is for a lot of members a long way to go and the 2024 target comes closer. The increasing of the defence budgets is certainly related with the states in the proximity of the Russian Federation. The 20% equipment guideline is already achieved by 16 states or a majority of the member states. The more important members of the NATO (the big nine: USA, UK, FRG, France, Italy, Canada, Poland, Spain and Turkey) are, with exception of Canada and Spain, conform to at least one of these goals. But seeing the budget invoice for the public finances in relation with the ‘Corona’ pandemic, it's not clear if that should give effects on the achievement of these goals by the members. A second factor is the decreasing of the GDP of the countries as result of this pandemic.

Concerning the ‘Atlantic balance’ the differences between the both sides of the Atlantic Ocean the conclusion is that the gap has narrowed. The two mean reasons are the greater GDP share of the United States and the increase of the European defence expenditures. Another examined item was the changes in the nominal amounts of the defence budgets of the members. The United States has still the most important defence budget followed by the United Kingdom. The figures are proving that the creation of a European defence pillar, without the UK, can only be a success if the continental states are prepared to devote more budget resources to the defence field. But seeing and knowing their situation of the public finances this is not a realistic option. In other words a more independent European defence system is only a realistic with the collaboration of the United Kingdom. Also it's not clear if all the member states of the European Union are interested in this idea?

In the last part of this study, the article examined the relationship between the GDP and “Defence Expenditures” (DE) versus the capita. The main conclusion is that, over all the countries, the global growth of the DE was higher than the GDP increase. This part of the study proves also the higher standard of living in the members situated in North America, North- and Western Europe.

The latter is certainly a consequence of the problems in the public finances in many countries and also the lack of political interest for defence issues. 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.

REFERENCES

1. NATO/OTAN. Annual Report of the Secretary-General for 2019,

- OTAN – Rapport Annual du Secrétaire Général Pour 2019, Brussels, 19 March 2020, p. 128.
2. Annual Report. The figures for the years 2013-2019. For the figures of 2010-2012 this study used the Annual Report, 2017.
 3. NATO/OTAN. Annual Report of the Secretary-General for 2017, Brussels, May 2018, p. 117.
 4. NATO. Wales Summit Declaration, 5 September 2014 (Last updated 30 August 2018 at the NATO website).