

# ANALYSIS OF DEFENCE, HEALTH, AND EDUCATION EXPENDITURES IN EUROPE'S COUNTRIES

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*Nowadays the amount of money that a state is allocating for the defense is very important, along with the education and health. In this paper we have analyzed, with the help of the data provided by the United Nations Human Development Report 2019 and the Global Firepower 2020 what is the situation of these expenses in the countries in Europe.*

**Key words:** HDI rank; GDP; military expenses; health expenses; education expenses; ratio; trends.

## 1. INTRODUCTION

The United Nations Organization is publishing regularly a Human Development Report for almost all the countries worldwide.

The main indicator for ranking the countries is the Human Development Index – HDI. It is a composite indicator comprising complex calculations and taking into consideration as main dimensions the Life expectancy index, the Education index, and the GNI index (Gross National Income).

Each year the HDR has a different theme and in 2019 the military expenses were also presented.

## 2. STATISTICAL ANALYSIS

We have chosen to present in this paper the situation in the

European countries. We synthesized the data for 5 different indicators: the percentage of GDP allocated for military expenditure (2010-2018); the Ratio of education and health expenditure to military expenditure (2010-2016); Military Strength Rank 2020, Government expenditure on education as percentage of GDP (2013-2018); Current health expenditure as percentage of GDP (2016).

We have eliminated, of course, the countries for which we didn't have all the data for all the indicators – Andorra, Bosnia and Herzegovina, Cyprus, Greece, Iceland, Liechtenstein, Luxembourg, Malta, Montenegro, and North Macedonia. In order to have a more compact presentation of the data we have used the countries codes. We ended up with 36 European countries to present.

### 2.1. HDI ranks

The first indicator presented in each of the HDR is the Human Development Index (HDI). The countries in Europe are placed at “very high human development” – Norway (NO), Switzerland (CH), Ireland (IE), Germany (DE), Sweden (SE), Netherlands (NL), Denmark (DK), Finland (FI), United Kingdom (UK), Belgium (BE), Austria (AT), Slovenia (SI), Spain (ES), Czechia (CZ), France (FR), Italy (IT), Estonia (EE), Poland (PL), Lithuania (LT), Slovakia (SK), Latvia (LV), Portugal (PT), Hungary (HU), Croatia (HR), Russian Federation (RU), Belarus

(BY), Bulgaria (BG), Romania (RO), Turkey (TR), and “high human development” – Serbia (RS), Albania (AL), Georgia (GE), Armenia (AM), Azerbaijan (AZ), Ukraine (UA), Republic of Moldova (MD). The exact HDI Rank for each country mentioned above is presented in the next 4 tables.

For a simpler presentation of the different groups of countries we have split them in 4 tables for each one of the indicators. We will name them: G1, G2, G3, and G4.

We will keep this order of the countries for all the tables in this paper.

**Table 1** HDI Ranks for G1

HDI Ranks								
NO	CH	IE	DE	SE	NL	DK	FI	UK
1	2	3	4	8	10	11	12	15

**Table 2** HDI Ranks for G2

HDI Ranks									
BE	AT	SI	ES	CZ	FR	IT	EE	PL	LT
17	20	24	25	26	26	29	30	32	34

**Table 3** HDI Ranks for G3

HDI Ranks									
SK	LV	PT	HU	HR	RU	BY	BG	RO	TR
36	39	40	43	46	49	50	52	52	59

**Table 4** HDI Ranks for G4

HDI Ranks						
RS	AL	GE	AM	AZ	UA	MD
63	69	70	81	87	88	107

As you can observe, Romania is ranking 52, in the group of the countries with “very high human development”.

**2.2. Military expenditure**

We have made a ranking of the 36 European countries mentioned above according to the percentage of GDP allocated for Military expenditure. The results are in the 4 tables below.

**2.3. Ratio of education and health expenditure to military expenditure**

The next ranking of the European countries was the one according to education and health compared to military expenses.

**Table 5** Military expenditure ranks for G1

Military expenditure ranks								
NO	CH	IE	DE	SE	NL	DK	FI	UK
17	34	36	24	30	23	26	19	14

**Table 6** Military expenditure ranks for G2

Military expenditure ranks									
BE	AT	SI	ES	CZ	FR	IT	EE	PL	LT
32	33	31	21	28	6	20	7	9	10

**Table 7** Military expenditure ranks for G3

Military expenditure ranks									
SK	LV	PT	HU	HR	RU	BY	BG	RO	TR
25	8	15	29	18	2	22	16	12	5

**Table 8** Military expenditure ranks for G4

Military expenditure ranks						
RS	AL	GE	AM	AZ	UA	MD
13	27	11	1	4	3	35

Romania is on the 12<sup>th</sup> place out of 36 with 1.9% of GDP. The first 3 countries in this ranking are Armenia (4.8%), Russian Federation (3.9%), and Ukraine and Azerbaijan (3.8%). The last ones – with only 0.3% are Moldova and Ireland.

This Ratio was calculated by the statistical experts as a composite index, taking into consideration also external variables. You can see the results of our personal ranking in the next 4 tables.

**Table 9** Ratio of education and health expenditure to military expenditure for G1

Ratio h+e / m ranks								
NO	CH	IE	DE	SE	NL	DK	FI	UK
24	34	35	26	31	28	30	23	15

**Table 10** Ratio of education and health expenditure to military expenditure for G2

Ratio h+e / m ranks									
BE	AT	SI	ES	CZ	FR	IT	EE	PL	LT
32	33	29	21	27	13	22	9	6	17

**Table 11** Ratio of education and health expenditure to military expenditure for G3

Ratio h+e / m ranks									
SK	LV	PT	HU	HR	RU	BY	BG	RO	TR
19	20	14	25	10	1	16	12	7	5

**Table 12** Ratio of education and health expenditure to military expenditure for G4

Ratio h+e / m ranks						
RS	AL	GE	AM	AZ	UA	MD
11	18	8	3	2	4	36

Romania is on the 7<sup>th</sup> place in this ranking, with a Ratio of 5.5. In the first 3 places are the Russian Federation with 1.9, Azerbaijan with 2.6, and Armenia with 3.9. Austria (22.6), Switzerland (25.5), Ireland (32.7), and Moldova (35.8) are the countries that are allocating much more money on education and health compared with the military sector.

#### 2.4. Military Strength Rank

The fourth ranking that we have calculated in this paper is the one arranging the countries in accordance with their Military Strength Rank that took into consideration over 50 individual factors to determine a given nation's PowerIndex. The results are displayed in the next 4 tables.

**Table 13** Military Strength Rank for G1

MSR								
NO	CH	IE	DE	SE	NL	DK	FI	UK
11	10	30	6	12	14	16	20	3

**Table 14** Military Strength Rank for G2

MSR									
BE	AT	SI	ES	CZ	FR	IT	EE	PL	LT
27	25	31	7	13	2	5	36	8	28

**Table 15** Military Strength Rank for G3

MSR									
SK	LV	PT	HU	HR	RU	BY	BG	RO	TR
19	32	21	18	26	1	17	22	15	4

**Table 16** Military Strength Rank for G4

MSR						
RS	AL	GE	AM	AZ	UA	MD
24	35	29	33	23	9	34

Romania has the 15<sup>th</sup> place in this Ranking. The first 3 countries in Europe are Russian Federation (2<sup>nd</sup> in the World), France (7<sup>th</sup> in the World), and United Kingdom (8<sup>th</sup> in the World).

## **2.5. Government expenditure on education**

The fifth ranking presented here refers to government expenditure on education, as percent of GDP. The Scandinavian

countries – Denmark, Norway, Sweden, and Finland have more than 7%. Romania is among the last 3 countries in Europe, with only 3.1%, alongside with

Azerbaijan (2.9%), and Armenia (2.8%). The exact ranking for all the 36 countries is presented in the 4 tables below.

**Table 17** Government expenditure on education ranks for G1

Government expenditure on education ranks								
NO	CH	IE	DE	SE	NL	DK	FI	UK
2	14	33	20	3	11	1	4	8

**Table 18** Government expenditure on education ranks for G2

Government expenditure on education ranks									
BE	AT	SI	ES	CZ	FR	IT	EE	PL	LT
6	10	16	25	7	9	27	13	19	26

**Table 19** Government expenditure on education ranks for G3

Government expenditure on education ranks									
SK	LV	PT	HU	HR	RU	BY	BG	RO	TR
21	12	17	22	23	32	18	28	34	24

**Table 20** Government expenditure on education ranks for G4

Government expenditure on education ranks						
RS	AL	GE	AM	AZ	UA	MD
30	29	31	36	35	15	5

## 2.6. Current health expenditure

The last indicator that we have analyzed is the current health expenditure as percent of GDP in the European countries. This category is similar with the one referring to education. Here the first 3 countries are: Switzerland (12.2%), France (11.5%), and

Germany (11.1%). Also Sweden, Norway, Austria, Netherlands, Denmark, and Belgium have more than 10%.

Romania again, unfortunately, is among the last 2 countries (with 5%). Compared to this, Bulgaria has allocated 8.2% for health expenditures, and Moldova 9%!

**Table 21** Current health expenditure ranks for G1

Current health expenditure ranks								
NO	CH	IE	DE	SE	NL	DK	FI	UK
5	1	21	3	4	7	8	12	11

**Table 22** Current health expenditure ranks for G2

Current health expenditure ranks									
BE	AT	SI	ES	CZ	FR	IT	EE	PL	LT
9	6	18	16	24	2	17	29	31	30

**Table 23** Current health expenditure ranks for G3

Current health expenditure ranks									
SK	LV	PT	HU	HR	RU	BY	BG	RO	TR
25	33	15	22	23	34	32	20	35	36

**Table 24** Current health expenditure ranks for G4

Current health expenditure ranks						
RS	AL	GE	AM	AZ	UA	MD
13	28	19	10	26	27	15

### 3. CONCLUSIONS

Military expenditure is just a small part of all the elements involved in the process of building a strong defense of a nation. Along with the equipment and the infrastructure, the investment in the personnel is of paramount importance. For that we need that the sectors of education and health be also very well-funded.

### ENDNOTES

**Military expenditures:** All current and capital expenditures on the armed forces, including peacekeeping forces; defense ministries and other government agencies engaged in defense projects; paramilitary forces, if these are judged to be trained and equipped for military operations; and military space activities.

**Ratio of education and health expenditure to military expenditure:** Sum of government

expenditure on education and health divided by military expenditure

**Government expenditure on education:** Current, capital and transfer spending on education, expressed as a percentage of GDP.

**Current health expenditure:** Spending on healthcare goods and services, expressed as a percentage of GDP. It excludes capital health expenditures such as buildings, machinery, information technology and stocks of vaccines for emergency or outbreaks

### REFERENCES

- [1] <https://www.globalfirepower.com/countries-listing.asp>
- [2] <http://hdr.undp.org/en/data>
- [3] <http://hdr.undp.org/en/2019-report>
- [4] [http://hdr.undp.org/sites/default/files/hdr2019\\_technical\\_notes.pdf](http://hdr.undp.org/sites/default/files/hdr2019_technical_notes.pdf)
- [5] <https://databank.worldbank.org/databases>