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# NATO AND CSTO: THE GAME OF POWER AND INTERESTS

#### Abstrakt:

Artykuł przedstawia układ sił pomiędzy Organizacją Traktatu Północnoatlantyckiego a Organizacją Układu Bezpieczeństwa Zbiorowego w odniesieniu do interesów geopolitycznych obu sojuszy polityczno-wojskowych. W badaniach potęgi gospodarczej, wojskowej i geopolitycznej wykorzystano metody polskiej szkoły potęgometrycznej. Prezentowane wyniki badań oparto na aktualnych danych empirycznych. Konkluzje wskazują na ilościowe i jakościowe dysproporcje w układzie sił oraz oceniają ich wpływ na realizację interesów geopolitycznych obu organizacji

Słowa kluczowe: NATO, WNP, OUBZ, geopolityka, potęgometria, potęga gospodarcza, potęga wojskowa, potęga geopolityczna.

#### Introduction

The rising tension in political-military relations between the West and Russia is taking on the symptoms of the new Cold Warwith the more advantage of struggling over cooperation. The game of power and interests between the two West and East military alliances, the North Atlantic Treaty Organization (NATO) and the Collective Security Treaty Organization (CSTO) is an important factor in the study of the international security system. The both alliances are increasing their power to successfully implement adopted geostrategic goals. The economic, military (conventional) and geopolitical power of these two military alliances as well as their permanent member states are calculated according to the methodology of powermetrics (Białoskórski, Kiczma, Sulek, 2019, p. 7; 2020)<sup>1</sup>.

<sup>&</sup>lt;sup>1</sup> Powermetrics is a new term, introduced by the Polish scientist Mirosław Sułek, combining two concepts –"power" and "metric". It has been adopted on the ground of Polish science. Powermetrics is the applied science dealing with measurements, assessments and evaluation

The states are rivaling about the possible best position in the hierarchy (ranking) of the international system. This rivalry is a so-called 'zero-sum game', where winning of one side is a loss the other side with the same size. A global power is always equal to a one hundred percent, while the ratio of power of states is constantly changing. To get the best possible position in the international system states have to maximize their power. It depends on the state's geostrategy and will and political determination to achieve assumed national interests (goals). Such interactions (clash) of national interests are determined by the political system (authority) and the implementation conditions. Thus, states has to calculate the possibility of pursuing their national interests according to their power and will of society (in democratic system) or hard decision of leader(s) (in an autocratic regime). It is also limited by the global energy resources and takes two forms: (1) cooperation (trade resources) or (2) struggle (taking other people's resources). The cooperation is a so-called 'positive-sum game', where all players profit, though in different degree. Struggle (in a different spheres: political, economic, military etc.) is a so-called 'negative-sum game', in which all players lose, though in different degree. Thus, in constant competition for maximum share of power, states alternate between cooperation and struggle, depending on the specific conditions (Sułek, 2013, pp. 23–27). The military alliances are strong the resultant of the power and geopolitical ambitions (interests) of their member states.

#### Powermetric methodology

The powermetric study based on the quantitative and qualitative methods of the research of the international balance of power seems to be very useful in the geostrategic studies (Białoskórski, 2018). To fulfill this scientific task a powermetrics implements the formal models of power and its derived indicators. Among many different approaches (Höhn, 2011) I have adopted the modern model developed by the Polish scientist Mirosław Sułek (Sułek, 2020), (Sułek, 2013).<sup>2</sup> This model recognizes three types of power: (1) economic (general) power (EP), (2) military power (MP) and (3) geopolitical power (GP).

of public life participant's (actors) power, particularly of states, and the modelling, simulation and forecast of relationship between them in global, regional and local dimension. The powermetric research focused on two main areas: (1) economic – resulting from the desire to rationalize the costs (expenditures) of the development and defence in the certain circumstances and conscious of their formation; (2) political-military – resulting from the desire to occupy the best position and to play the best role in the international distribution system.

<sup>&</sup>lt;sup>2</sup> Mirosław Sułek is a professor at the Faculty of Political Science and International Studies of the Warsaw University. He is an economist, praxeologist and analyst of the strategic studies. He is an active member of the Polish Society of International Studies and Polish

The rivalry in the international system, states aims at maximization of power in form of sociological power (Mazur, 1996, p. 183).<sup>3</sup> It relies on establishing proportions between cooperation and struggle (and therefore changing management standards) in order to achieve the best ratio of power. The international relations are synthesis of cooperation and struggle, in different spheres and proportions, determined during rivalry.

In the international distribution of power, the states pursue their **goals** defining a **potential (capability)** and employing social support (**will**) and appropriate **strategy**.

In general approach, the national power is the product of tangible, intellectual and spiritual potential (Sulek, 2010, p. 98), (Moczulski, 1999, pp. 402–403):

$$NP = TP \times IP \times SP$$

Where:

NP – national power,

TP - tangible potential,

IP – intellectual potential,

SP – spiritual potential.

It can be also expressed as the product of national resources (potential), strategy and will to pursue national strategy by the political unit:

#### $NP = R \times NS \times W$

Where:

NP – national power,

R – resources,

NS – national strategy,

W – will to pursue of national strategy.

In both formulas, the tangible potential (resources) relates to presented synthetic concept of economic power (EP), military power (MP) and geopolitical power (GP). Taking, that the expression of the organizational and production ability or the collective action ability is the stream (flow) of the gross

Geopolitical Society and Vice-President of the Polish Scientific Society of Praxeology. He is considered as the founder and popularizer of the Polish powermetric school.

<sup>&</sup>lt;sup>3</sup> It refers to cybernetic theory of known Polish scientist Marian Mazur and considers a power in the category of sociological power. There are two principle forms of sociological power of state: (1) Internal power – within political system of state and (2) External power – in the international system.

domestic product (GDP) in time, economic (general) power can be expressed by the formula<sup>4</sup>:

$$EP = (GDP)^{0.652} \times L^{0.217} \times a^{0.109}$$

Where:

EP – economic (general) power (Sułek, 2001, p. 87–97), GDP – gross domestic product, L – population, a – area (territory).

Concept of military power (MP) formal (synthetic) model is based on economic power approach (EP) stressing the total character of state power, including military power.

Assuming that the expression of organizational and production skills (ability to collective activity) is the flow of military expenditures (expressed in time unit), the military power can be expressed by the following formula:

$$MP = (MEX)^{0.625} \times S^{0.217} \times a^{0.109}$$

Where:

MP – military power, MEX – military expenditures, S – soldiers (active), a – area (territory).

It has to be noted that the synthetic model takes into account the military power, as a conventional military power without nuclear factor, which must be researched separately.

The concept of geopolitical power (GP) formal (synthetic) model is based on economic (general) power (EP) and military power approach stressing the total character of state power, including economic power and military power.

The geopolitical power is expressed by the following formula:

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<sup>&</sup>lt;sup>4</sup> The economic power can be understood narrowly or broadly. In the narrow meaning of the main component of economic power is the value of GDP expressed in time, while in a broad sense, the expression of economic power are also demographic and spatial (territory) factors, which are an expression of the general power. In reflection, I took the view of a broad economic (general) power, which part is the military power. The exponent values of the powermetric formal model formulas were determined by the deductive method.

$$GP = \frac{EP + (2 \times MP)}{3}$$

Where:

GP – geopolitical power,

EP – economic (general) power,

MP – military power.

This formal model has assumed that the power of the world is a whole and equals 1. The power of each state is therefore a fraction (share) of this size. To clarity of the presented results, the fractions can be multiplied by any number, e.g. if we multiply them by 100, we will get results in percent of the world's power (then the power of the world = 100%). We can also multiply them by 1000 (then the power of the world = 1000), which means that it can be expressed in the millimir (mM) i.e. the thousandth parts of the power of the world.

The formal powermetric model adopted in this research can be implemented to measure the power of the individual states as well as the organizations (i.e. a sum of power values of the all permanent member states).

#### The synthetic balance of power

The research results clearly indicate a significant advantage of all indicators of the powermetric formal model related to NATO over CSTO. The all three power indicators (EP, MP, GP) of CSTO are the only about 10% of NATO volumes. The equally low values of GDP (11%), L (5%) and MEX (5%) are accompanied by a smaller difference values of a (86%) and S (33%) indicators of CSTO in relation to NATO (Figure 1).

The quantitative indicator of the difference in the number of the alliance permanent member states gives NATO advantage (NATO – 29; CSTO – 6), but the qualitative indicators ultimately determine the balance of power. The power of top member states (the political-military leaders), i.e. the United States (NATO) and the Russian Federation (CSTO) is the most important (Table 1&2).

The United States and the Russian Federation belong to ten top world power countries (Table 3). The United States plays the role of the second economic power (together with the leading China) and the leader of the military and geopolitical global systems. Additionally four NATO countries, Germany, France, the United Kingdom and Canada belong to this power ranking. The Russian Federation is the seventh economic power and fourth military and geopolitical world power. Other CSTO countries occupy further positions in the world power ranking.

90 80 70 60 50 40 30 20 10 0 EP [%] MP [%] GP [%] GDP [%] L[%] a [%] MEX[%] S[%] ■NATO □CSTO □CSTO/NATO

Figure 1. The powermetric formal model indicators of the NATO and CSTO in 2018 (world=100%) and the percentage share of CSTO/NATO rate

Source: Own elaboration on the basis of Sulek powermetric formal model and data from: The World Bank (2019) and The Military Balance (2019).

Table 1. The ranking of CSTO countries related to the indicators of the powermetric formal model in 2018 (world=100%)

Rank	Country	EP	Country	MP	Country	GP
	Name	[%]	Name	[%]	Name	[%]
1	Russian Federation	2.582	Russian Federation	3.910	Russian Federation	3.468
2	Kazakhstan	0.307	Kazakhstan	0.183	Kazakhstan	0.224
3	Belarus	0.101	Belarus	0.076	Belarus	0.084
4	Kyrgyz Republic	0.025	Tajikistan	0.026	Tajikistan	0.026
5	Tajikistan	0.025	Armenia	N/A	Kyrgyz Republic	0.008
6	Armenia	N/A	Kyrgyz Republic	N/A	Armenia	N/A
$>\!\!<$	Total	3.073	Total	4.294	Total	3.887
Rank	Country	GDP	Country	L	Country Name	a
Kalik	Name	[%]	Name	[%]		[%]
1	Russian Federation	1.932	Russian Federation	1.902	Russian Federation	12.860
2	Kazakhstan	0.199	Kazakhstan	0.241	Kazakhstan	2.120
3	Belarus	0.070	Belarus	0.125	Belarus	0.159
4	Armenia	0.014	Tajikistan	0.120	Kyrgyz Republic	0.151
5	Kyrgyz Republic	0.009	Kyrgyz Republic	0.083	Tajikistan	0.109
6	Tajikistan	0.009	Armenia	0.039	Armenia	N/A
$>\!\!<$	Total	2.233	Total	2.510	Total	15.399
Rank	Country Name	MEX [%]	Country Name	S [%]		$\times$
1	Russian Federation	2.722	Russian Federation	4.597		$\times$
2	Kazakhstan	0.095	Belarus	0.230	$\bigvee$	$>\!\!<$
3	Belarus	0.036	Armenia	0.230		$\nearrow$
4	Armenia	0.030	Kazakhstan	0.199		$>\!\!<$
5	Tajikistan	0.013	Kyrgyz Republic	0.056		
6	Kyrgyz Republic	N/A	Tajikistan	0.046		><
$\searrow$	Total	2.897	Total	5.358		> <

Legend: N/A – no data available for formula calculation;

Source: Own elaboration on the basis of Sulek powermetric formal model and data from: The World Bank (2019) and The Military Balance (2019).

Table 2. The ranking of NATO countries related to the indicators of the powermetric formal model in 2018 (world=100%)

	Country	EP	C	MD		CD
Rank	Country Name	[%]	Country Name	MP [%]	Country Name	GP [%]
1	United States	14.911	United States	22.618	United States	20.049
2	Germany	2.671	France	2.175	France	2.155
3	France	2.113	United Kingdom	1.918	Germany	2.105
4	United Kingdom	1.951	Germany	1.822	United Kingdom	1.929
5	Canada	1.841	Italy	1.189	Canada	1.382
6	Italy	1.596	Canada	1.152	Italy	1.325
7	Spain	1.253	Spain	0.843	Spain	0.980
8	Turkey	0.990	Turkey	0.733	Turkey	0.819
9	Poland	0.990	Poland	0.733	Poland	0.639
	Netherlands				Netherlands	
10		0.562	Netherlands	0.398		0.453
11	Belgium	0.357	Greece	0.362	Norway	0.342
12	Norway	0.348	Norway	0.338	Greece	0.318
13	Romania	0.297	Romania	0.318	Romania	0.311
14	Denmark	0.244	Belgium	0.218	Belgium	0.264
15	Czech Republic	0.235	Denmark	0.179	Denmark	0.201
16	Portugal	0.233	Portugal	0.160	Portugal	0.185
17	Greece	0.231	Czech Republic	0.158	Czech Republic	0.184
18	Hungary	0.175	Hungary	0.120	Hungary	0.138
19	Slovak Republic	0.112	Slovak Republic	0.085	Slovak Republic	0.094
20	Bulgaria	0.094	Lithuania	0.080	Bulgaria	0.080
21	Croatia	0.074	Bulgaria	0.073	Lithuania	0.075
22	Lithuania	0.064	Croatia	0.060	Croatia	0.065
23	Slovenia	0.053	Latvia	0.047	Latvia	0.046
24	Latvia	0.044	Estonia	0.043	Slovenia	0.042
25	Luxembourg	0.038	Slovenia	0.036	Estonia	0.041
26	Estonia	0.036	Luxembourg	0.016	Luxembourg	0.023
				0.015	A 11 '	0.010
27	Iceland	0.027	Albania	0.015	Albania	0.019
27 28	Iceland Albania	0.027	Albania Montenegro	0.015	Iceland	0.019
28	Albania Montenegro <b>Total</b>	0.026 0.009 32.292	Montenegro Iceland Total	0.008 N/A 38.217	Iceland Montenegro Total	0.009
28 29	Albania Montenegro	0.026 0.009 32.292 GDP	Montenegro Iceland	0.008 N/A 38.217	Iceland Montenegro	0.009 0.008
28 29	Albania Montenegro Total Country Name	0.026 0.009 32.292 GDP [%]	Montenegro Iceland Total Country Name	0.008 N/A 38.217 L [%]	Iceland Montenegro Total Country Name	0.009 0.008 36.242 a [%]
28 29	Albania Montenegro Total Country	0.026 0.009 32.292 GDP	Montenegro Iceland Total Country	0.008 N/A 38.217	Iceland Montenegro Total Country	0.009 0.008 36.242 a
28 29 <b>Rank</b> 1 2	Albania Montenegro Total Country Name	0.026 0.009 32.292 GDP [%]	Montenegro Iceland Total Country Name	0.008 N/A 38.217 L [%]	Iceland Montenegro Total Country Name	0.009 0.008 36.242 a [%]
28 29 <b>Rank</b>	Albania Montenegro Total Country Name United States	0.026 0.009 32.292 GDP [%] 23.885	Montenegro Iceland Total Country Name United States	0.008 N/A 38.217 L [%] 4.308	Iceland Montenegro Total Country Name United States	0.009 0.008 36.242 a [%] 7.183
28 29 <b>Rank</b> 1 2	Albania Montenegro Total Country Name United States Germany	0.026 0.009 32.292 GDP [%] 23.885 4.658 3.293 3.237	Montenegro Iceland Total Country Name United States Germany	0.008 N/A 38.217 L [%] 4.308 1.092	Iceland Montenegro Total Country Name United States Canada	0.009 0.008 36.242 a [%] 7.183 7.141
28 29 Rank 1 2 3	Albania Montenegro Total Country Name United States Germany United Kingdom	0.026 0.009 32.292 GDP [%] 23.885 4.658 3.293	Montenegro Iceland Total Country Name United States Germany Turkey France	0.008 N/A 38.217 L [%] 4.308 1.092 1.084	Iceland Montenegro Total Country Name United States Canada Turkey	0.009 0.008 <b>36.242</b> <b>a</b> [%] 7.183 7.141 0.604
28 29 Rank 1 2 3 4	Albania Montenegro Total Country Name United States Germany United Kingdom France	0.026 0.009 32.292 GDP [%] 23.885 4.658 3.293 3.237	Montenegro Iceland Total Country Name United States Germany Turkey	0.008 N/A 38.217 L [%] 4.308 1.092 1.084 0.882	Iceland Montenegro Total Country Name United States Canada Turkey France	0.009 0.008 <b>36.242</b> a [%] 7.183 7.141 0.604 0.430
28 29 Rank 1 2 3 4 5	Albania Montenegro Total Country Name United States Germany United Kingdom France Italy	0.026 0.009 32.292 GDP [%] 23.885 4.658 3.293 3.237 2.417	Montenegro Iceland Total Country Name United States Germany Turkey France United Kingdom	0.008 N/A 38.217 L [%] 4.308 1.092 1.084 0.882 0.876	Iceland Montenegro Total Country Name United States Canada Turkey France Spain	0.009 0.008 <b>36.242</b> a [%] 7.183 7.141 0.604 0.430 0.392
28 29 Rank 1 2 3 4 5 6	Albania Montenegro Total Country Name United States Germany United Kingdom France Italy Canada	0.026 0.009 32.292 GDP [%] 23.885 4.658 3.293 3.237 2.417 1.996	Montenegro Iceland Total Country Name United States Germany Turkey France United Kingdom Italy	0.008 N/A 38.217 L [%] 4.308 1.092 1.084 0.882 0.876 0.796	Iceland Montenegro Total Country Name United States Canada Turkey France Spain Norway	0.009 0.008 <b>36.242</b> a [%] 7.183 7.141 0.604 0.430 0.392 0.287
28 29 Rank 1 2 3 4 5 6 7	Albania Montenegro Total Country Name United States Germany United Kingdom France Italy Canada Spain	0.026 0.009 32.292 GDP [%] 23.885 4.658 3.293 3.237 2.417 1.996 1.662	Montenegro Iceland Total Country Name United States Germany Turkey France United Kingdom Italy Spain	0.008 N/A 38.217 L [%] 4.308 1.092 1.084 0.882 0.876 0.796 0.615	Iceland Montenegro Total Country Name United States Canada Turkey France Spain Norway Germany	0.009 0.008 36.242 a [%] 7.183 7.141 0.604 0.430 0.392 0.287 0.274
28 29 Rank 1 2 3 4 5 6 7 8	Albania Montenegro Total Country Name United States Germany United Kingdom France Italy Canada Spain Netherlands	0.026 0.009 32.292 GDP [%] 23.885 4.658 3.293 3.237 2.417 1.996 1.662 1.065	Montenegro Iceland Total Country Name United States Germany Turkey France United Kingdom Italy Spain Poland	0.008 N/A 38.217 L [%] 4.308 1.092 1.084 0.882 0.876 0.796 0.615 0.500	Iceland Montenegro Total Country Name United States Canada Turkey France Spain Norway Germany Poland Italy	0.009 0.008 36.242 a [%] 7.183 7.141 0.604 0.430 0.392 0.287 0.274 0.240
28 29 Rank 1 2 3 4 5 6 7 8	Albania Montenegro Total Country Name United States Germany United Kingdom France Italy Canada Spain Netherlands Turkey	0.026 0.009 32.292 GDP [%] 23.885 4.658 3.293 3.237 2.417 1.996 1.662 1.065 0.893	Montenegro Iceland Total Country Name United States Germany Turkey France United Kingdom Italy Spain Poland Canada	0.008 N/A 38.217 L [%] 4.308 1.092 1.084 0.882 0.876 0.796 0.615 0.500 0.488	Iceland Montenegro Total Country Name United States Canada Turkey France Spain Norway Germany Poland	0.009 0.008 36.242 a [%] 7.183 7.141 0.604 0.430 0.392 0.287 0.274 0.240 0.231
28 29 Rank 1 2 3 4 5 6 7 8 9	Albania Montenegro Total Country Name United States Germany United Kingdom France Italy Canada Spain Netherlands Turkey Poland	0.026 0.009 32.292 GDP [%] 23.885 4.658 3.293 3.237 2.417 1.996 1.662 1.065 0.893 0.683	Montenegro Iceland Total Country Name United States Germany Turkey France United Kingdom Italy Spain Poland Canada Romania	0.008 N/A 38.217 L [%] 4.308 1.092 1.084 0.882 0.876 0.796 0.615 0.500 0.488 0.256	Iceland Montenegro Total Country Name United States Canada Turkey France Spain Norway Germany Poland Italy United Kingdom	0.009 0.008 36.242 a [%] 7.183 7.141 0.604 0.430 0.392 0.287 0.274 0.240 0.231 0.190
28 29 Rank 1 2 3 4 5 6 7 8 9 10	Albania Montenegro Total Country Name United States Germany United Kingdom France Italy Canada Spain Netherlands Turkey Poland Belgium	0.026 0.009 32.292 GDP [%] 23.885 4.658 3.293 3.237 2.417 1.996 1.662 1.065 0.893 0.683 0.620	Montenegro Iceland Total Country Name United States Germany Turkey France United Kingdom Italy Spain Poland Canada Romania Netherlands	0.008 N/A 38.217 L [%] 4.308 1.092 1.084 0.882 0.876 0.796 0.615 0.500 0.488 0.256 0.227	Iceland Montenegro Total Country Name United States Canada Turkey France Spain Norway Germany Poland Italy United Kingdom Romania	0.009 0.008 36.242 a [%] 7.183 7.141 0.604 0.430 0.392 0.287 0.274 0.240 0.231 0.190 0.181
28 29 Rank 1 2 3 4 5 6 7 8 9 10 11 12	Albania Montenegro Total Country Name United States Germany United Kingdom France Italy Canada Spain Netherlands Turkey Poland Belgium Norway Denmark	0.026 0.009 32.292 GDP [%] 23.885 4.658 3.293 3.237 2.417 1.996 1.662 1.065 0.893 0.683 0.620 0.507	Montenegro Iceland Total Country Name United States Germany Turkey France United Kingdom Italy Spain Poland Canada Romania Netherlands Belgium Greece	0.008 N/A 38.217 L [%] 4.308 1.092 1.084 0.882 0.876 0.796 0.615 0.500 0.488 0.256 0.227 0.150	Iceland Montenegro Total Country Name United States Canada Turkey France Spain Norway Germany Poland Italy United Kingdom Romania Greece	0.009 0.008 36.242 a [%] 7.183 7.141 0.604 0.430 0.392 0.287 0.274 0.240 0.231 0.190 0.181 0.101
28 29 Rank 1 2 3 4 5 6 7 7 8 9 10 11 12 13 14	Albania Montenegro Total Country Name United States Germany United Kingdom France Italy Canada Spain Netherlands Turkey Poland Belgium Norway Denmark Czech Republic	0.026 0.009 32.292 GDP [%] 23.885 4.658 3.293 3.237 2.417 1.996 1.662 1.065 0.893 0.683 0.620 0.507 0.410 0.286	Montenegro Iceland Total Country Name United States Germany Turkey France United Kingdom Italy Spain Poland Canada Romania Netherlands Belgium Greece Czech Republic	0.008 N/A 38.217 L [%] 4.308 1.092 1.084 0.882 0.876 0.796 0.615 0.500 0.488 0.256 0.227 0.150 0.141 0.140	Iceland Montenegro Total Country Name United States Canada Turkey France Spain Norway Germany Poland Italy United Kingdom Romania Greece Bulgaria Iceland	0.009 0.008 36.242 a [%] 7.183 7.141 0.604 0.430 0.392 0.287 0.274 0.240 0.231 0.190 0.181 0.101 0.085
28 29 Rank 1 2 3 4 5 6 6 7 8 9 10 11 12 13	Albania Montenegro Total Country Name United States Germany United Kingdom France Italy Canada Spain Netherlands Turkey Poland Belgium Norway Denmark Czech Republic Romania	0.026 0.009 32.292 GDP [%] 23.885 4.658 3.293 3.237 2.417 1.996 1.662 1.065 0.893 0.683 0.620 0.507 0.410 0.286 0.279	Montenegro Iceland Total Country Name United States Germany Turkey France United Kingdom Italy Spain Poland Canada Romania Netherlands Belgium Greece Czech Republic Portugal	0.008 N/A 38.217 L [%] 4.308 1.092 1.084 0.882 0.876 0.796 0.615 0.500 0.488 0.256 0.227 0.150 0.141 0.140 0.135	Iceland Montenegro Total Country Name United States Canada Turkey France Spain Norway Germany Poland Italy United Kingdom Romania Greece Bulgaria Iceland Portugal	0.009 0.008 36.242 a [%] 7.183 7.141 0.604 0.430 0.392 0.287 0.274 0.240 0.231 0.190 0.181 0.085 0.079
28 29 Rank 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Albania Montenegro Total Country Name United States Germany United Kingdom France Italy Canada Spain Netherlands Turkey Poland Belgium Norway Denmark Czech Republic Romania Portugal	0.026 0.009 32.292 GDP [%] 23.885 4.658 3.293 3.237 2.417 1.996 1.662 1.065 0.893 0.620 0.507 0.410 0.286 0.279 0.277	Montenegro Iceland Total Country Name United States Germany Turkey France United Kingdom Italy Spain Poland Canada Romania Netherlands Belgium Greece Czech Republic Portugal Hungary	0.008 N/A 38.217 L [%] 4.308 1.092 1.084 0.882 0.876 0.796 0.615 0.500 0.488 0.256 0.227 0.150 0.141 0.140 0.135 0.129	Iceland Montenegro Total Country Name United States Canada Turkey France Spain Norway Germany Poland Italy United Kingdom Romania Greece Bulgaria Iceland Portugal Hungary	0.009 0.008 36.242 a [%] 7.183 7.141 0.604 0.430 0.392 0.287 0.274 0.240 0.231 0.190 0.181 0.085 0.079 0.072 0.071
28 29 29 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Albania Montenegro Total Country Name United States Germany United Kingdom France Italy Canada Spain Netherlands Turkey Poland Belgium Norway Denmark Czech Republic Romania Portugal Greece	0.026 0.009 32.292 GDP [%] 23.885 4.658 3.293 3.237 2.417 1.996 1.662 1.065 0.893 0.620 0.507 0.410 0.286 0.279 0.277 0.254	Montenegro Iceland Total Country Name United States Germany Turkey France United Kingdom Italy Spain Poland Canada Romania Netherlands Belgium Greece Czech Republic Portugal Hungary Bulgaria	0.008 N/A 38.217 L [%] 4.308 1.092 1.084 0.882 0.876 0.796 0.615 0.500 0.488 0.256 0.227 0.150 0.141 0.140 0.135 0.129 0.092	Iceland Montenegro Total Country Name United States Canada Turkey France Spain Norway Germany Poland Italy United Kingdom Romania Greece Bulgaria Iceland Portugal Hungary Czech Republic	0.009 0.008 36.242 a [%] 7.183 7.141 0.604 0.430 0.392 0.287 0.274 0.240 0.231 0.190 0.181 0.101 0.085 0.079 0.072 0.071 0.061
28 29 29 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Albania Montenegro Total Country Name United States Germany United Kingdom France Italy Canada Spain Netherlands Turkey Poland Belgium Norway Denmark Czech Republic Romania Portugal Greece Hungary	0.026 0.009 32.292 GDP [%] 23.885 4.658 3.293 3.237 2.417 1.996 1.662 1.065 0.893 0.683 0.620 0.507 0.410 0.286 0.279 0.277 0.254 0.181	Montenegro Iceland Total Country Name United States Germany Turkey France United Kingdom Italy Spain Poland Canada Romania Netherlands Belgium Greece Czech Republic Portugal Hungary Bulgaria Denmark	0.008 N/A 38.217 L [%] 4.308 1.092 1.084 0.882 0.876 0.796 0.615 0.500 0.488 0.256 0.227 0.150 0.141 0.140 0.135 0.129 0.092 0.076	Iceland Montenegro Total Country Name United States Canada Turkey France Spain Norway Germany Poland Italy United Kingdom Romania Greece Bulgaria Iceland Portugal Hungary Czech Republic Lithuania	0.009 0.008 36.242 a [%] 7.183 7.141 0.604 0.430 0.392 0.287 0.274 0.240 0.231 0.190 0.181 0.005 0.079 0.072 0.071 0.061 0.049
28 29 29 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Albania Montenegro Total Country Name United States Germany United Kingdom France Italy Canada Spain Netherlands Turkey Poland Belgium Norway Denmark Czech Republic Romania Portugal Greece Hungary Slovak Republic	0.026 0.009 32.292 GDP [%] 23.885 4.658 3.293 3.237 2.417 1.996 1.662 1.065 0.893 0.620 0.507 0.410 0.286 0.279 0.277 0.254 0.181 0.124	Montenegro Iceland Total Country Name United States Germany Turkey France United Kingdom Italy Spain Poland Canada Romania Netherlands Belgium Greece Czech Republic Portugal Hungary Bulgaria Denmark Slovak Republic	0.008 N/A 38.217 L [%] 4.308 1.092 1.084 0.882 0.876 0.796 0.615 0.500 0.488 0.256 0.227 0.150 0.141 0.140 0.135 0.129 0.092 0.076 0.072	Iceland Montenegro Total Country Name United States Canada Turkey France Spain Norway Germany Poland Italy United Kingdom Romania Greece Bulgaria Iceland Portugal Hungary Czech Republic Lithuania Latvia	0.009 0.008 36.242 a [%] 7.183 7.141 0.604 0.430 0.392 0.287 0.274 0.240 0.231 0.190 0.181 0.101 0.085 0.079 0.072 0.071 0.061 0.049
28 29 29 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Albania Montenegro Total Country Name United States Germany United Kingdom France Italy Canada Spain Netherlands Turkey Poland Belgium Norway Denmark Czech Republic Romania Portugal Greece Hungary	0.026 0.009 32.292 GDP [%] 23.885 4.658 3.293 3.237 2.417 1.996 1.662 1.065 0.893 0.683 0.620 0.507 0.410 0.286 0.279 0.277 0.254 0.181	Montenegro Iceland Total Country Name United States Germany Turkey France United Kingdom Italy Spain Poland Canada Romania Netherlands Belgium Greece Czech Republic Portugal Hungary Bulgaria Denmark	0.008 N/A 38.217 L [%] 4.308 1.092 1.084 0.882 0.876 0.796 0.615 0.500 0.488 0.256 0.227 0.150 0.141 0.140 0.135 0.129 0.092 0.076	Iceland Montenegro Total Country Name United States Canada Turkey France Spain Norway Germany Poland Italy United Kingdom Romania Greece Bulgaria Iceland Portugal Hungary Czech Republic Lithuania	0.009 0.008 36.242 a [%] 7.183 7.141 0.604 0.430 0.392 0.287 0.274 0.240 0.231 0.190 0.181 0.005 0.079 0.072 0.071 0.061 0.049

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25         Latvia         0.041         Latvia         0.025         Belgium           26         Estonia         0.035         Estonia         0.017         Albania           27         Iceland         0.030         Montenegro         0.008         Slovenia           28         Albania         0.018         Luxembourg         0.008         Montenegro           29         Montenegro         0.006         Iceland         0.005         Luxembourg           Total         47.210         Total         12.349         Total           Rank         Country Name         S [%]           1         United States         38.610         United States         6.941	0.026 0.024 0.022 0.016 0.011 0.002 17.970
26         Estonia         0.035         Estonia         0.017         Albania           27         Iceland         0.030         Montenegro         0.008         Slovenia           28         Albania         0.018         Luxembourg         0.008         Montenegro           29         Montenegro         0.006         Iceland         0.005         Luxembourg           Total         47.210         Total         12.349         Total           Rank         Country Name         S [%]           1         United States         38.610         United States         6.941	0.022 0.016 0.011 0.002
27         Iceland         0.030         Montenegro         0.008         Slovenia           28         Albania         0.018         Luxembourg         0.008         Montenegro           29         Montenegro         0.006         Iceland         0.005         Luxembourg           Total         47.210         Total         12.349         Total           Rank         Country Name         S [%]         S [%]           1         United States         38.610         United States         6.941	0.016 0.011 0.002
28         Albania         0.018         Luxembourg         0.008         Montenegro           29         Montenegro         0.006         Iceland         0.005         Luxembourg           Total         47.210         Total         12.349         Total           Rank         Country Name         S [%]         S [%]           1         United States         38.610         United States         6.941	0.011
29   Montenegro   0.006   Iceland   0.005   Luxembourg	0.002
Total   47.210   Total   12.349   Total	
Rank     Country Name     MEX [%]     Country Name     S       1     United States     38.610     United States     6.941	17.970
Rank     Country Name     MEX [%]     Country Name     [%]       1     United States     38.610     United States     6.941	
1 United States 38.610 United States 6.941	>
	$\geq \leq$
2 United Kingdom   3.368   Turkey   1.813	
3 France 3.203 France 1.042	$>\!<$
4 Germany 2.742 Germany 0.919	> <
5 Italy 1.493 Italy 0.873	$>\!<$
6 Canada 1.095 United Kingdom 0.756	> <
7 Spain 0.907 Greece 0.725	> <
8 Netherlands 0.678 Spain 0.613	$>\!<$
9 Poland 0.649 Poland 0.603	$>\!<$
10 Turkey 0.474 Romania 0.352	> <
11 Norway 0.408 Canada 0.342	$>\!<$
12 Belgium 0.299 Netherlands 0.179	$>\!<$
13 Greece 0.294 Bulgaria 0.158	> <
14 Romania 0.278 Hungary 0.143	> <
15 Denmark 0.255 Belgium 0.138	><
16 Czech Republic 0.165 Portugal 0.138	> <
17 Portugal 0.155 Norway 0.117	$\times$
18 Hungary 0.098 Czech Republic 0.117	$\times$
19 Slovak Republic 0.077 Lithuania 0.102	$\times$
20 Lithuania 0.063 Slovak Republic 0.082	$\times$
21 Croatia 0.045 Denmark 0.077	$>\!<$
22 Bulgaria 0.043 Croatia 0.077	$\times$
23 Latvia 0.041 Albania 0.041	> <
24 Estonia 0.038 Slovenia 0.036	> <
25 Slovenia 0.032 Latvia 0.031	> <
26 Luxembourg 0.024 Estonia 0.031	> <
27 Albania 0.008 Montenegro 0.010	> <
28 Montenegro 0.005 Luxembourg 0.005	> <
29 Iceland 0.002 Iceland N/A	> <
Total 55.551 Total 16.462	> <

Legend: N/A – no data available for formula calculation;

Source: Own elaboration on the basis of Sulek powermetric formal model and data from: The World Bank (2019) and The Military Balance (2019).

The quantitative indicator of the difference in the number of the alliance permanent member states gives NATOadvantage (the NATO - 29 and the CSTO - 6), but the qualitative indicators ultimately determine the balance of power. Qualitatively, the Russian economic, military and geopolitical power is the only 17% of the American power (Białoskórski, 2020).

The United States is the leader of NATO's total power. It covers as much as 46% of economic power, 59% of military power and 55% of geopolitical power of the alliance. The EU countries of NATO (22 countries) cover 41% of economic power, 30% of military power and 33% of geopolitical

power (Figure 2). This EU's power indicators will significantly decrease after the complete Brexit implementation. The accession of the Northern Macedonia to NATO on March 27, 2020 as the 30th member state does not significantly affect the balance of the total alliance's power.

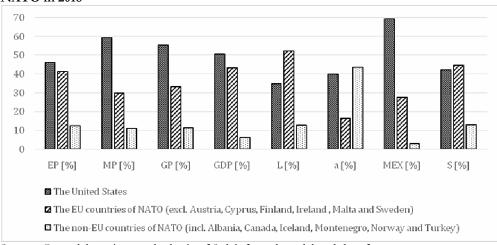
Table 3. The world ranking of ten top economic, military and geopolitical power in 2018 (world=100%)

Rank	Economic Power		Military Power		Geopolitical Power	
	State	EP [%]	State	MP [%]	State	GP [%]
1	China	15.679	United States	22.618	United States	20.049
2	United States	14.911	China	10.326	China	12.110
3	India	4.818	India	4.218	India	4.418
4	Japan	3.391	Russian Federation	3.910	Russian Federation	3.468
5	Brazil	2.812	Saudi Arabia	3.445	Saudi Arabia	2.605
6	Germany	2.671	France	2.175	Japan	2.466
7	Russian Federation	2.582	Brazil	2.139	Brazil	2.363
8	France	2.113	Japan	2.004	France	2.155
9	United Kingdom	1.951	United Kingdom	1.918	Germany	2.105
10	Canada	1.841	Korea, Rep.	1.880	United Kingdom	1.929

Source: Own elaboration on the basis of Sulek formal model and data from:

The World Bank (2019) and The Military Balance (2019).

Figure 2. The percentage share of the indicators of the powermetric formal model for NATO in 2018



Source: Own elaboration on the basis of Sulek formal model and data from:

The World Bank (2019) and The Military Balance (2019).

The Russian Federation is the CSTO's political-military hegemonic state. It covers as much as 84% of economic power, 91% of military power and 89% of geopolitical power of the alliance. Russia provides CSTO the conventional as well as the nuclear military power. The share of Russia's military expenditure in CSTO is up to 94% (Figure 3). In practice, CSTO's military power is the military power of the Russian Federation.

100 90 80 70 60 50 40 30 20 10 0 EP [%] MP [%] GP [%] GDP [%] L[%] a [%] MEX[%] S[%] ■ The Russian Federation ■ The other CSTO countries

Figure 3. The percentage share of the indicators of the powermetric formal model for the CSTO in 2018

Source: Own elaboration on the basis of Sulek formal model and data from: The World Bank (2019) and The Military Balance (2019).

#### The game of the political-military interests

The North Atlantic Treaty Organization (NATO) geostrategic goals are focused on the collective defence and protection of peace and security of all member states. It is supported by the Western political-military alliance of the Australian, New Zealand and the United States (ANZUS) and the European Union (EU), economic regional organization with the common security and defence ambitions. NATO is strong of the joined economic, military and geopolitical power of their member states capable of implement its geostrategic interests, but it has to be released by the political will, readiness and strong cooperation of all allies. Due to the top world power status, the United States has a privileged political position in NATO, often disputed by the top European NATO's countries, France and Germany.

The Russia's aggression against Ukraine (armed annexation of Crimea and military operations in eastern Ukraine) has influenced the NATO's decisions to strengthen the defence of the Eastern Flank. In 2014, the Alliance

has decided to create a Very High Readiness Joint Task Force (VJTF) and two years later to install a permanent military presence in the Central and Eastern Europe. At the same time, the United States has decided to deploy an armoured brigade and return to development of the ballistic missile defence project in this region. In December 2017, the United States in strategy 'preserve peace through strength' has identified revisionist power of Russia as well as China, the rogue states of Iran and North Korea and transnational threat organizations as one of three main sets of security challengers. The Russia's geopolitical challenge to the West has intensified NATO-CSTO struggle in the international system. There are also some internal NATO's challenges: (1) the differing narratives on the future of trans-Atlantic relations; France and Germany focus on the U.S. rivalry with China and claim that Washington is gradually withdrawing politically and militarily from Europe, while the eastern flank countries (with Poland for the forefront) emphasise the return of the U.S. to Europe and the unprecedented political and military engagement in the region, (2) the varying threat perceptions; since 2014, NATO has started to strengthen the collective defence on the eastern flank countries by increasing allied military presence in Poland, the Baltic states and Romania; Washington wants to direct the NATO attention to China's increasingly assertive and growing economic and military power, also (or above all) relates to Chinese activity in Europe affecting broader security (5G civilian telecommunication network discussion); France and Germany present the different political-military attitude to the Russian threat than Middle and Eastern Europe countries, (3) insufficient consultations on strategic issues, like operations in northern Syria (e.g. the U.S. decision to withdrawal of troops; Turkish uncoordinated military offensive targeted against Kurdish groups allied with the U.S.; a German proposal to set up a security zone and French concerning reopening a strategic dialogue with Russia without consulting the Allies), (4) disagreements over defence spending; the 2% of GDP defence investment pledge to be fulfilled by 2024 is inalterably on NATO's agenda, however, twelve Allies (including Germany and Italy) still allocate less than 1.4% of their military expenditures and (5) the imbalance of power as the question of leadership inside the Alliance, especially between U.S. and the European countries (Gotkowska, 2019).

NATO is still in transformation process and faces the challenge how to better manage Europe's collective defence on the eastern flank and crisis response in the southern neighbourhood. The European pillar of NATO has to be strengthened and an intra-European unity and consensus in European security and defence policy, taking into account various perspectives i.a. between France, Germany and Poland, has to be found. The political-military agreement on the European military capabilities and policy coordination should be developed to strengthen the Alliance and relations with the United States

without adversely affecting the NATO and trans-Atlantic ties. It is still the best political-military option for all NATO allies (Gotkowska, 2019).

CSTO plays the role of the Collective Forces of the Commonwealth of Independent States created with the political-military ambitions as the NATO equivalent (so called 'East NATO'). There are the following geostrategic goals of CSTO: strengthening peace, international and regional security and stability, ensuring the collective defense of independence, territorial integrity and sovereignty of the member states, in attainment of which the member states shall give priority to political measures. The Allies shall also coordinate and harmonize their efforts in combating international terrorism and extremism, the illicit traffic in narcotic drugs, psychotropic substances and arms, organized transnational crime, illegal migration and other threats. CSTO has been created by the Russian Federation to keep its geopolitical interests in the CIS zone. After 17 years of development, CSTO is still far away from full operational readiness with many problems and disappointments. The CSTO Collective Forces consist of the CSTO Peacekeeping Forces (CSTO PF) created in October 2007 to conduct peacekeeping operations (ca. 4-5 thous.), the CSTO Collective Rapid Reaction Forces (CSTO CRRF) created in Febrauary 2009 (ca. 5-6 thous.) to repel military aggression, conduct anti-terrorist operations, fight transnational crime and drug trafficking and neutralize the effects of natural disasters (the reaction to interstate conflicts is not within the range of their responsibility; they are located in Russia, under one command) and the CSTO Collectvie Operational Reaction Forces (CSTO CORF) created in June 2009 composed of the special forces and airborne troops to conduct the rapid military operations in any area. The structures of the CSTO Collective Air Forces (CSTO CAF) and the CSTO Crisis Response Center (CSTO CRC) are under development. The future and the international role of the CSTO depends on the geostrategic interests of the Russian Federation. This leads also to internal conflicts in the Alliance because not all members agree with the Russia's hegemonic policy (Nikitina, 2013), (de Hass, 2016), (Mrvaljevic, 2015), (Dabrowski, 2019). The CSTO Allies of Russia are divided into insignificant and loyal and significant, whose loyalty is questionable (Makijenko, 2020). The geostrategic ambitions of the CSTO to get a political-military balance relative to NATO military power is unreal from powermetric research, because the economic, geopolitical and conventional military power of CSTO is much lower (the only ca. 11%) than the power of NATO (Figure 1). Of course, the Russian Nuclear Forces provide the CSTO nuclear power, but this problem is beyond this study. The CSTO political efforts expended towards securing international recognition as a regional security organization and getting acknowledged by NATO as an equal and legitimate partner are ineffective. Even interaction with the Shanghai Cooperation Organization (SCO) is limited due to Chinese reservations and fears that a closer relationship between CSTO and SCO might

give the impression to the outside world that SCO endeavoured to become a 'NATO of the East' preferring political and economic cooperation (de Hass, 2016, p. 37) and NATO has consistently refused to enter into any contacts with the quasi alliance. On the other side, Russia is building ties with China in SCO and keeping it away by strengthening CSTO (Baev, 2014, p. 42; 46).

The Shanghai Cooperation Organization (SCO) is Eurasian political, economic, and military organization based on group of states 'Shanghai Five' with the participation of China, Kazakhstan, Kyrgyzstan, Russia and Tajikistan. After accession of Uzbekistan, this formula has been changed to SCO in 2001. It is open for enlargement now, although the initial positions of parties were quite different. The largest members (China and Russia) claimed that it was premature and undesirable (Douhan, 2013, p. 6). Finally India and Pakistan have joined SCO in 2017. SCO aims to strengthen mutual security, fight terrorism, extremism and separatism ('three evil forces'), promote trade and, in practice, to resist Western-type democratic changes and NATO enlargement and serves as a counterpoise to Western organizations (Oldberg, 2010, p. 9) (Oldberg, 2016, p. 5). To achieve these goals, SCO has adopted the Shanghai Convention on Combating Terrorism, Separatism and Extremism and created the Regional Anti-Terrorist Structure (RATS) of SCO with headquarters in Tashkent in 2001 (operating since 2003). To build anti-drug zone around Afghanistan the Agreement on cooperation in combating illicit trafficking of drugs, psychotropic substances and their precursors was accepted in 2004 (Rozanov, 2013, pp. 43– 45). SCO is an organization with two political-military leaders - China and Russia, in contrast to CSTO with the only one leader – Russia (De Hass, 2016). The future role of SCO depends mainly on two factors: (1) relations between Russia and China; the degree of compatibility of their interests and priorities in the Eurasian region, (2) American foreign and security policy in the Central Asia (Rozanov, 2013, pp. 48-49). The SCO development may have negative consequences for the broader American interests in the Eurasian region (Boland, 2011, p. 50). From other side, SCO can play an important role in axis of power – the US, Europe and Japan – not be seen as a threat but a vehicle for increasing economic and social prosperity in the region (Prajakti&Siddharth, 2007).

#### **Conclusions**

The balance of power of two regional security organizations, NATO and CSTO in the context of their political and military interests (goals) has been examined. NATO has the largest global economic, military and geopolitical power to implement its security interests. The power of NATO is the power of the United States supported by the power of the European and non-European member states. The United States demands European allies to increase their military power. The top American position in NATO is often disputed by the

top European members - France and Germany. The Russia's imperial political and military aspirations and its aggressive foreign policy are among the major challenges and threats of NATO, which decided to strengthen the eastern flank militarily. The NATO's weakness is the complicated political-military decisionmaking process and the transfer of armed forces into the operational region. The political-military aspirations of CSTO under the Russian hegemony to play NATO's equivalent role (so called 'East NATO') must be assessed as unreal. The powermetric research prove a powerful advantage of economic, military and geopolitical power of NATO. The future and the international role of CSTO fully depends on the geostrategic interests of the Russian Federation to maintain political and military control over the part of the former post-Soviet area. Compared to NATO, the CSTO decision-making process based on the Russia's political and military supremacy allows for rapid use and deployment of armed forces in the operational area. To strengthen the political and military position of CSTO, Russia is seeking cooperation with Central and East Asian countries, especially China, India and Pakistan under SCO and ASEAN. As the economic world power and the military great power, China rivalling the United States on the domination in the international system is potentially very attractive partner for the Russian Federation. However, the Chinese-Russian relations are complicated for historical and geopolitical reasons.

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#### NATO and CSTO: the Game of Power and Interests

The paper examines the balance of power in relation to the security interests of the North Atlantic Treaty Organization (NATO) and the Collective Security Treaty Organization (CSTO). The economic, military (conventional) and geopolitical power of these two military alliances as well as their permanent member states are calculated according to the powermetric methodology and actually available data. It refers to a powermetrics as the applied science dealing with measurements, assessments and evaluation of public life participant's (actors) power, particularly of states, and the modeling, simulation and forecast of relationship between them in global, regional and local dimension. Studying the ratio of power it has been estimated the abilities of the alliances to achieve their security interests.

**Key words:** NATO, CIS, CSTO, ODKB, geopolitics, powermetrics, economic power, military power, geopolitical power.