



# **HARKUL GLOBAL MILITARY POWER RANKING (2021)**

HARKUL DEFENCE AND AVIATION – JUNE 2021

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## HARKUL GLOBAL MILITARY POWER RANKING (2021)

Military power is a combination of a Nation's armed forces capabilities and other national power elements, which support the military. Some organizations have developed global military power rankings and share them with the public annually that those rankings have also been in the news coverage in Turkish Media. It is, however, noticed that there are sometimes discrepancies in these rankings. **With the idea that Turkey - one of the major military powers- should also have an indigenous index, we developed the first Turkish Global Military Power Index as the HARKUL Defence and Aviation Company.**

HARKUL Global Military Power Index, developed by the defence research centre of our company, prioritizes conventional capabilities but also takes into calculation today's important military factors such as; special forces, missile defence systems, ballistic missile capabilities, Armed Unmanned Aerial Systems, and space and cyber capabilities. Furthermore, the index includes the defence industry capacity, military alliances and overseas military bases, which have a weight on the overall military power. Besides the numeric capabilities, the index assesses the non-numeric ones such as; operational experience or officer competencies. Nuclear weapons are excluded, however. Detailed information about the index can be found in the first part of the report.

HARKUL Military Power Index identifies the top 30 military powers. According to the 2021 evaluation, 11 countries are in the Asia-Pacific (Australia included), 8 are in Europe (Turkey included), 6 in the Middle East and Africa, 3 in the Americas and 2 in the Euro-Asia (Russia and Ukraine). The evaluation has put forward important results. **The most important one is that China and Russia have almost become equal military powers. Secondly, the military powers of Asia and the Middle East are on the rise. On the other hand, a transformation has started for the advantage of air and naval powers in the Asian militaries, which traditionally have large numbers of soldiers and land forces. Additionally, many nations are working to develop their defence industry to lessen military dependence on big powers. Finally, the numbers of European countries in the top 30 are in decline. Furthermore, the ranks of those European states present in the top 30 are falling.** In addition to the general evaluation results, we provide special assessments on some specific countries as well in our first report. We plan to continue with this way in the following years too.

HARKUL Global Military Power Index, which we share with you with this report, is based on concrete criteria and a numericalized-model, developed with a neutral approach. The rankings and assessments present only an angle of view. The nature of war teachings tells us that the value of an armed force can only be observed in wars and different types of military operations.

I wish to express that we are honoured to share Turkey's first Global Military Power Index. We believe that HARKUL Global Military Power Index, developed in 2021 and shared with the public with a report (in Turkish and English), will be paid interest at home and abroad. Finally, I congratulate and thank those who have made this report originated and published.

Ufuk URAS (Retired Brigadier General)  
Director of HARKUL Defence Studies Research Centre





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## 1. INTRODUCTION TO HARKUL GLOBAL MILITARY POWER INDEX

**HARKUL Global Military Power Index** is a conventional capability heavy index. Except for nuclear weapons, non-conventional capabilities are also covered by the index. The national power elements that support the military power are included in the index too. The index is divided into six parts; human-power, military capabilities, economy, logistics, defence industry and geo-politics. The weight of military power is higher than others. Detailed information about the index is explained in the below paragraphs. Additionally, the criteria are shown briefly in Table-1.

**Human-power:** Covers the national human resources as well as active and reservist military personnel. The weight of the military personnel is higher than national human resources. The ratio of professional soldiers is a plus in the calculation.

**Military Capabilities:** Divided into four parts; land, naval, air and other capabilities. As a general approach, the nations that use high-tech systems are advantageous than others in the calculation since a higher coefficient is applied to the new generation systems in our formula.

**Land Military Capabilities:** Tanks, Armoured Vehicles, Artillery and MLRSs are counted. The army helicopters are calculated within the air capabilities. The weight of tanks and armoured vehicles are considerably higher than the artillery in the calculation. The weightage of MLRSs, however, is higher than the artillery.

**Naval Military Capabilities:** The combat ships are counted. The highest weight is given to primarily aircraft carriers and then to the helicopter carriers. In order, destroyers, submarines and frigates have higher weightage in the calculation than other navy vessels.

**Air Military Capabilities:** The combat aircraft and attack helicopters given higher weight. All navy and land force aircraft and helicopters included in the airpower. The Armed UASs also covered by air power. As the quantities of Armed UASs that nations have are not known, the Nations are categorized into four groups and ranked based on their R&D efforts, manufacturing capabilities and types of the systems used in operations. Air and missile defence systems counted in the other military capabilities category.

**Other Military Capabilities:** In this category, air and missile defence systems, special forces, marine forces, space and cyber capabilities, military alliances, overseas military bases, UN arms embargoes (negative points), combat and operational experience and competencies of officers are defined as criteria. These criteria are numericalised by the use of the multiple scale method. For example, the combat experience criteria are numericalised with four scales as; state to state war in the last 25 years, cross border combat operations experience, counter-terrorism operations experience, and peace support operations experience.

**Economy:** GDP, External Debts, Defence Budget, Foreign Exchange and Gold Reserves used as economic indicators.

**Logistics:** Labour-force, merchant marine fleet, air and seaports, roadway and railway coverage, oil production, oil consumption and oil reserves used as logistics criteria in the index.

**Defence Industry:** As the national defence industries are of vital importance for the development and sustainability of national militaries, it is constructed as one of the main parts of the





index. However, only four criteria are used at this stage since many of the national defence industry data are not accessible in open sources. These four criteria are; the capacity to meet military requirements by national defence industry products, the share in the global arms exports, companies among the top 100 and their annual revenues.

**Geo-politics:** The geographical size, historical and geographical importance and the capacity to influence regional and global developments of the countries are used as three criteria in this category.

All data connected to the defined criteria are taken from open sources. The military power ranking formula is constructed with the weight and coefficients that applied to those criteria. The weight of military factors is considerably higher than others. Among these military factors, operationally important and new generation systems have a higher coefficient than other systems. The national power elements that support the military can influence the rankings. Their weights are defined based on the importance of these elements.

HARKUL Military Power Index presents a relevant and realistic evaluation. Thirty countries are listed in this first report. It could be possible to increase the number of countries and update the criteria in the index in the future. However, the calculation method will very likely be preserved in order to be able to observe future trends.

Human Power	Military Capabilities	Economy	Logistics	Defence Industry	Geo-politics
Population	Land Military Capabilities	GDP	Labour Force	Capacity to meet military requirements by national defence industry products	Size
Fit for Military Service	Naval Military Capabilities	External Debts (Negative effect)	Merchant Marine Fleet	Companies among the top 100	Historical and geographical importance
Reaching Military Age Annually	Air Military Capabilities	Defence Budget	Sea Ports	Revenues of the companies among the top 100	Capacity to influence regional and global developments
Active Personnel	<b>Other Military Capabilities</b> (Air and missile defence systems, special forces, marine forces, paramilitary forces, space and cyber capabilities, military alliances, overseas military bases, UN arms embargoes (negative points), combat and operational experience and competencies of officers)	Foreign Exchange Reserves	Airports	Share in the global arms exports	
Reserve Personnel		Gold Reserves	Roadway coverage		
Ratio of Professional Soldiers			Railway coverage		
Paramilitary			Oil production and consumption		
			Oil reserves		

Table-1; Global Military Power Index Criteria



## 2. 2021 GLOBAL MILITARY POWER EVALUATION

2021 Global Military Power Rankings and Country Scores are shown in Table-2.

Rank	Country	Military Power Score	Rank	Country	Military Power Score	Rank	Country	Military Power Score
01	USA	19.898	11	Egypt	3.084	21	N. Korea	2.134
02	Russia	11.450	12	Germany	3.063	22	Spain	2.102
03	China	11.364	13	Pakistan	3.061	23	Ukraine	2.018
04	India	6.463	14	S. Arabia	2.916	24	Taiwan	1.808
05	S. Korea	4.712	15	Brazil	2.853	25	Algeria	1.674
06	France	4.468	16	Italy	2.820	26	Poland	1.643
07	Japan	4.118	17	Israel	2.805	27	Vietnam	1.542
08	Turkey	4.065	18	Indonesia	2.561	28	UAE	1.539
09	UK	4.031	19	Australia	2.504	29	Greece	1.520
10	Iran	3.148	20	Canada	2.302	30	Thailand	1.468

Table-2; Global Military Power Rankings and Country Scores

It can be deduced from the analysis of Table-2 that the top 30 military powers are divided into four groups. USA, Russia and China are in the first category. India is not in that category, and this is not merely about the score of India. **The countries in the first category; have sizeable human resources, logistics and financial resources, high quantities of modern weapon systems, capable of power projection and conduct of diverse military operations and sustainability of those capabilities nationally, and capacity to design, develop, manufacture and exporting of high-tech defence products.**

India, South Korea, France, Japan, Turkey and the United Kingdom are in the second category. With self-sustainability, overseas bases in different regions in the world and power projection capabilities France and UK seem to be in the first category, however, both are in the second due to the limited resources and size of their military.

The third category countries are those which have quantitatively or qualitatively high military capacity. These countries are Iran, Egypt, Germany, Pakistan, Saudi Arabia, Brazil, Italy, Israel, Indonesia, Australia, Canada, North Korea and Spain. Some of these countries are in this category because of their outnumbered human resources and weapon systems. Some countries, however, are in this category based on their vast national resources and other countries with average size but advanced military capabilities. The fourth category countries have comparatively limited military capacity.

The USA is still the top military power. The USA is at the top in all areas except for the human resource (China is at the top) and land force (Russia is at the top), particularly the US air force is ahead by a large margin. The most striking point in the ranking is that there is very little difference between the scores of China and Russia. Although Russia's score in military capabilities is considerably higher than that of China, China has a very close overall military power score to Russia based on the national power elements that support the military. India has been preserving its 4<sup>th</sup> place in the ranking for many years. Sizeable and advanced conventional capabilities and personnel strength make South Korea indisputably the 5<sup>th</sup> military power in the ranking. It is not surprise that France is the 6<sup>th</sup> and UK





is the 9<sup>th</sup> military power. Despite the low personnel strength and small conventional forces, these two countries have high overall scores with their vast operational experiences, missile and missile defence capabilities, advanced defence industry and overseas bases. **The scores of Japan and Turkey are very close.** The navy and economic power have raised Japan's rank, whereas land military capabilities and operational experiences have raised Turkey's.

The scores of the countries from 10 to downwards are very close to each. In case of possession of a new capability by any country in this category, the rankings will likely change in annual evaluations. **For example, Egypt may surpass Iran next year on receipt of the ordered systems.** The 10<sup>th</sup> rank of Iran can be seen as a surprise. However, Iran has outperformed many countries with a high number of rocket systems and personnel strength, oil production capability, meeting a large number of defence requirements by the national defence industry and by some specific operational capabilities despite it has old generation conventional systems.

Brazil and Indonesia are two economically and industrially developing large countries. But the militaries of them are small and have limited operational capabilities in comparison with other big countries. **For that reason, contrary to the results of some indexes, it is not very likely that these two countries will place in the top 10 in the short term.**

Ukraine has jumped to the 23<sup>rd</sup> rank since it has continuously improved its military capabilities due to the ongoing crisis in the Donbas and Crimea. After Egypt, Algeria is the second military power of Africa. The United Arab Emirates is a rising military power with the new capabilities that it has possessed in recent years. It is likely that Greece, which is at the 29<sup>th</sup> rank, will elevate a couple of steps up with the receipt of already ordered systems.

In Table-3 below, the rankings are shown based solely on military capabilities.

Rank	Country	Score of Military Capabilities and Its Percentage to the Overall Military Power		Rank	Country	Score of Military Capabilities and Its Percentage to the Overall Military Power	
01	USA	13.240	67 %	16	Saudi Arabia	1.836	63 %
02	Russia	7.780	68 %	17	Australia	1.741	69 %
03	China	5.804	51 %	18	Ukraine	1.315	65 %
04	India	3.113	48 %	19	Spain	1.300	62 %
05	France	3.020	67 %	20	Algeria	1.286	77 %
06	S. Korea	2.901	61 %	21	Greece	1.177	77 %
07	Turkey	2.892	71 %	22	Poland	1.163	70 %
08	UK	2.837	69 %	23	Canada	1.135	50 %
09	Japan	2.517	61 %	24	UAE	1.109	71 %
10	Pakistan	2.237	73 %	25	Taiwan	1.081	60 %
11	Israel	2.110	75 %	26	Indonesia	1.074	42 %
12	Egypt	2.057	66 %	27	Brazil	1.026	36 %
13	Iran	2.029	64 %	28	N. Korea	929	44 %
14	Italy	1.889	67 %	29	Vietnam	922	60 %
15	Germany	1.844	60 %	30	Thailand	909	62 %

\* Table-3; Military Capabilities Ranking





The 60-70 % of military capability to the overall military power considered as a balanced ratio. The ratios of China, India, Canada, Indonesia, Brazil and N. Korea are low. That indicates the national power elements have a valuable role in the rankings of these countries as military powers. N. Korea, with outnumbered personnel strength and conventional systems, has a low overall military capability score because the majority of the systems it has are old generation. Other countries, however, have higher military power than that of their military capabilities because they are resource-rich. On the other hand, the ratios (military capabilities to the overall military power) of Turkey, Pakistan, Israel, Algeria, Greece and UAE are relatively higher.

In Table-4 below, countries that manpower and land military capabilities have a high percentage are listed for their ratios. The table shows that an important number of the Asian and Middle East countries have manpower and land military power centric militaries. **Except for the country-specific and other exceptional situations, it can be deduced that naval and air military capabilities of the countries, which manpower and land military capabilities constitute 40% or above in the Table, have not yet matured their development. The case of South Korea is different. It will be analyzed separately in Part 4.** Turkey's ratio of 31% is slightly high, but it still can be considered as a balanced ratio in comparison with other countries. The reason behind this ratio is not related to the manpower strength but to the requirement for a large Army due to the threats emanating from Syria and Iraq conflict regions and for the long-lasting counter-terrorism mission. The lower ratios of Brazil, Indonesia, Canada and Australia are connected with the national power elements and small size of their land forces rather than air force and navy strength.

Country		The weight of Land Military Systems and Human Resource in Overall Military Power	Country		The weight of Land Military Systems and Human Resource in Overall Military Power
01	North Korea	64 %	16	Thailand	28 %
02	Vietnam	50 %	17	Brazil	26 %
03	Ukraine	49 %	18	Poland	26 %
04	South Korea	47 %	19	Greece	26 %
05	Taiwan	45 %	20	Israel	25 %
06	Egypt	44 %	21	Indonesia	25 %
07	India	43 %	22	Italy	23 %
08	Pakistan	42 %	23	USA	19 %
09	Algeria	39 %	24	Germany	16 %
10	Iran	38 %	25	Japan	16 %
11	China	36 %	26	France	14 %
12	Russia	36 %	27	UK	13 %
13	Saudi Arabia	34 %	28	Australia	11 %
14	UAE	32 %	29	Spain	11 %
15	Turkey	31 %	30	Canada	11 %

\* Table-4; Ratios of Personnel Strength and Land Military Capabilities of the Countries.



In Table-5 below, countries are listed with their scores of land, naval, air and other military capabilities. The criteria of each military capability group are explained in Part 1.

Rank	Land Military Systems Score		Naval Military Systems Score		Air Military Systems Score**		Other Military Capabilities Score	
01	Russia	3.047	USA	2.297	USA	5.657	USA	2.450
02	USA	2.836	China	1.743	Russia	1.812	UK	1.860
03	China	1.816	Russia	1.236	China	1.270	France	1.765
04	South Korea	1.187	Japan	707	India	689	Russia	1.685
05	Egypt	973	India	608	South Korea	528	Turkey	1.230
06	Turkey	880	South Korea	501	Japan	505	Australia	1.175
07	Iran	823	France	398	France	503	India	1.120
08	India	696	UK	372	Turkey	486	Israel	1.120
09	Saudi Arabia	691	Italy	302	Saudi Arabia	457	Germany	1.070
10	Ukraine	673	Turkey	296	Pakistan	415	China	975
11	Pakistan	639	Egypt	252	Israel	348	Japan	920
12	Algeria	530	Indonesia	244	Egypt	327	Spain	850
13	Israel	524	North Korea	243	UK	309	Italy	835
14	Taiwan	481	Iran	239	Germany	308	Canada	830
15	Vietnam	466	Australia	213	Italy	302	Pakistan	825
16	Italy	450	Greece	204	Iran	262	Poland	725
17	North Korea	450	Taiwan	200	Brazil	239	Iran	705***
18	UAE	410	Pakistan	178	Spain	236	South Korea	685
19	Japan	385	Germany	177	Greece	212	Egypt	685
20	France	354	Spain	167	Australia	199	Saudi Arabia	600
21	UK	296	Algeria	151	Indonesia	168	Indonesia	550
22	Germany	289	Brazil	147	North Korea	161	Greece	520
23	Poland	270	Thailand	137	UAE	157	Brazil	500
24	Greece	241	Vietnam	134	Thailand	129	Ukraine	500
25	Thailand	168	Israel	118	Algeria	128	Algeria	475
26	Australia	154	Canada	108	Ukraine	124	Thailand	475
27	Brazil	140	Saudi Arabia	88	Poland	118	UAE	465
28	Indonesia	112	UAE	77	Canada	114	Taiwan	300
29	Canada	83	Poland	50	Taiwan	100	Vietnam	250
30	Spain	47	Ukraine	18	Vietnam	72	North Korea	75***

\* Table-5; Ranking of Countries with their Land, Naval, Air and Other Military Capability Scores

\*\*The Air Military Capabilities also include Land Force and Navy Aircraft, Helicopters and Armed UASs. Due to the lack of verified data on Armed UAS inventory, the countries are categorized into four groups and ranked under their capabilities.

\*\*\*Since Iran and North Korea are subject to UNSCR sanctions, their other military capability scores reduced proportionally.

USA's air power is considerably higher than that of Russia and China. China's naval power has surpassed Russia's. The naval and air systems of India are much developed than its Army systems. Other military capabilities of the UK, France, Turkey, Australia, Israel and Germany have a high weight



within their military capabilities. Consequently, these distinct capabilities have significantly contributed to their ranks.

### 3. ARE RUSSIA AND CHINA EQUAL MILITARY POWERS?

China has reached Russia’s overall military power score. **However, China is still far behind Russia’s military capabilities score, which is the sum of land, naval, air and other military capabilities** (See Table 6 and Graphic-1). With more than thirteen thousand tanks and four thousand aircraft, Russia is both quantitatively and qualitatively ahead of China. But Russia has fallen behind China’s naval power, which has been continuously grown and upgraded with new capabilities. Having been confronted with the USA in the South China Sea and with aspirations to expand its influence into Africa and the Middle East, China has been elevating its naval capacity too fast in recent years. China’s navy fleet has outnumbered the US navy. However, US Navy is still far more ahead of Chinese Naval power based on its capabilities. Other Military Capabilities score of China is also behind Russia. **This difference can be explained by the limited operational experience, overseas military bases and military alliances scores.**

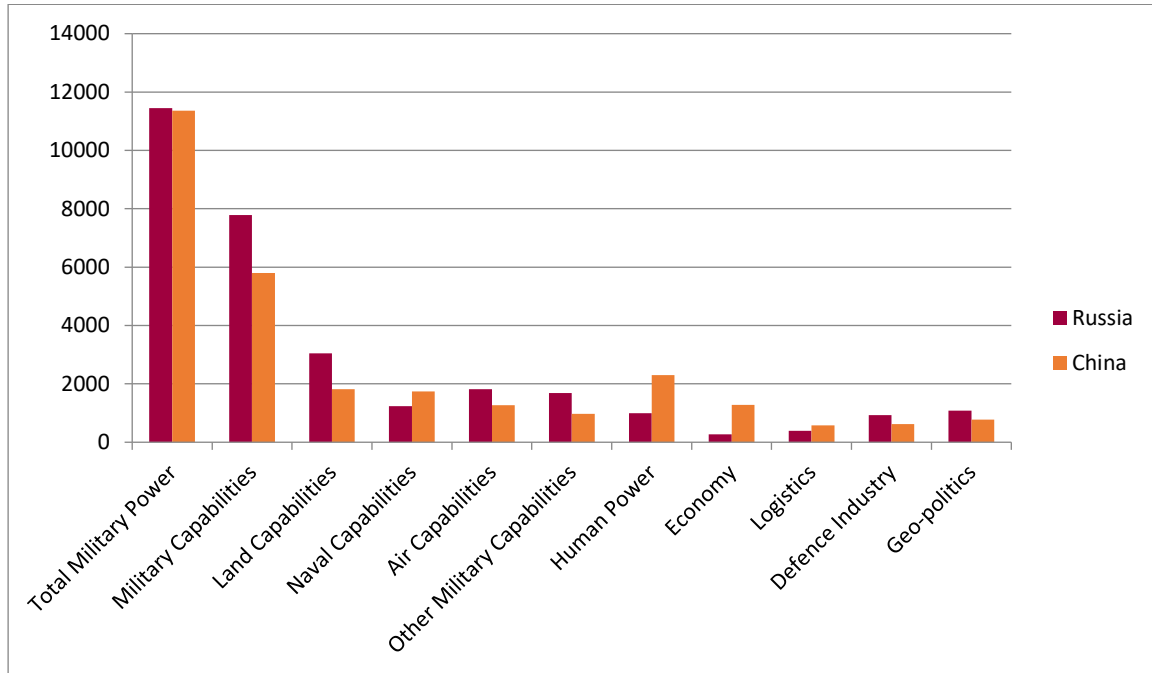
China’s almost 200 Billion US Dollar Defence Budget, which has a high weight in the economy score, provides China an important advantage compared to Russia. **The rich military budget enables China to accomplish the projects in short periods of time and modernize land, naval and air capabilities.** For example, on 23<sup>rd</sup> April 2021, China commissioned a strategic ballistic missile defence submarine, a destroyer and an amphibious assault ship on the same day. The Russian Defence Industry is far more ahead of China with a 20% share of global arms exports. However, the Chinese defence industry has been advancing very fast. In 2020, eight Chinese Defence Companies have been in the top 100 defence companies with total annual revenue of 180 Billion US Dollars. <sup>1</sup> China will likely have a higher share in the global arms market in the coming years, which China is currently behind the USA, Russia and France. With increased sales to the Middle East, China surpassed Germany’ global arms export share in 2018. France is very much concerned with China’s rising competitiveness in Africa and the Middle East market.

With fast-growing military capabilities, China will likely overtake Russia in the mid-term. It is also possible that China could overtake the USA in 2035 or beyond, and the US is highly concerned with this trend.

Country	Total Military Power Score	Military Capabilities Score					Human Power Score	Economy Score	Logistics Score	Defence Industry Score	Geo-politics Score
		Land Military Systems Score	Naval Military Systems Score	Air Military Systems Score	Other Military Systems Score	Total Military Systems Score					
Russia	11.450	3.047 28 %	1.236 12 %	1.812 12 %	1.685 16 %	7.780 68 %	990 9 %	273 3 %	395 3 %	932 8 %	1.080 9 %
China	11.364	1.816 16 %	1.743 16 %	1.270 11 %	975 8 %	5.804 51 %	2.298 20 %	1.281 11 %	579 5 %	622 5 %	780 7 %

\* Table-6; Russia and China Military Power Comparison

<sup>1</sup> Top 100 for 2020, Defense News, <https://people.defensenews.com/top-100/>, 25 May 2021



\* Graphic-1; Russia and China Military Power Comparison

#### 4. THE FIFTH MILITARY POWER, SOUTH KOREA

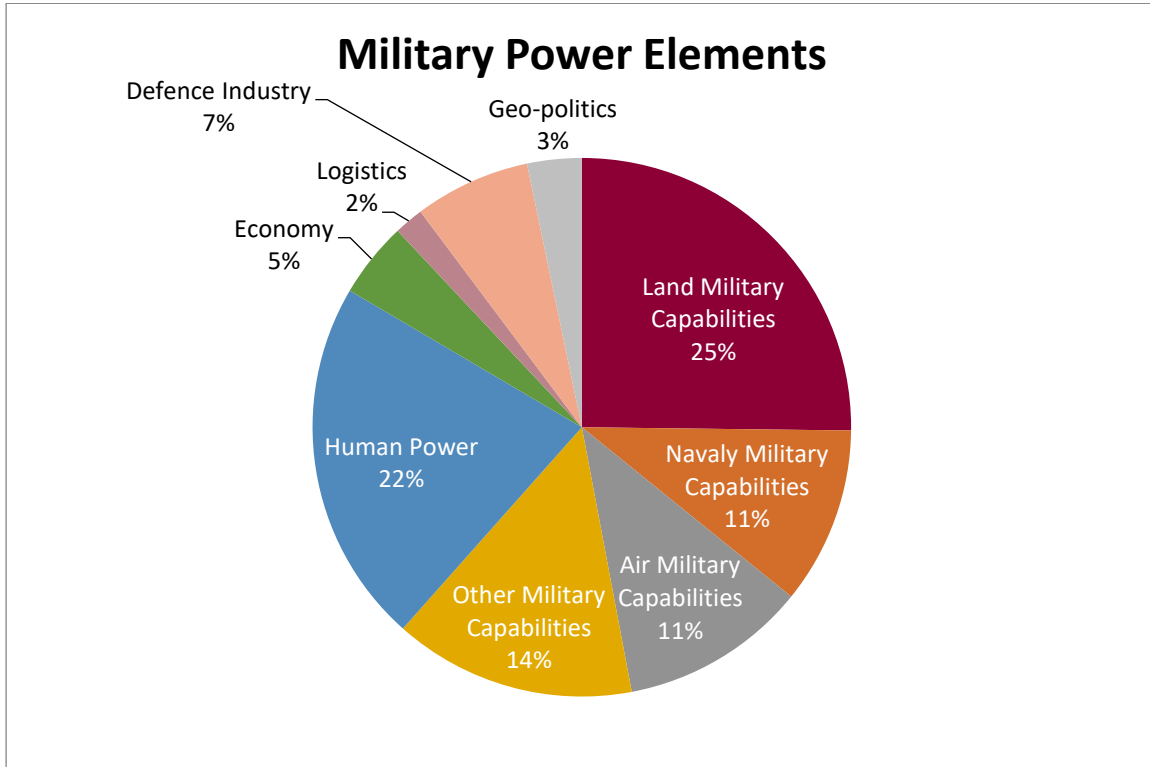
South Korea has become the 5<sup>th</sup> military power in the world. The rise of South Korea as a military power is related to the threat of North Korea and China, the developed Korean economy and the policy of reducing the military dependence on the USA. **Although South Korea has a large size navy and air force, the Army constitutes the heavy portion of the Armed Forces.** South Korea does not have a large population, but the personnel strength of 600.000 active and 3 million reservists have raised the human power score and thereby the military power score. As seen in Table-4 above, the manpower and land military capabilities constitute 47% of total military power. The score in these two areas is very high compared to the Western countries. For example, in Italy, which has a balanced power distribution among the services, this ratio is 23 %. Turkey's ratio is 31%. The other military capabilities score of South Korea is relatively low as it does not have overseas military bases and has limited operational experience and ballistic missiles. **The 5<sup>th</sup> rank of Korea cannot be attributed solely to the manpower and land military capabilities.** For example, the naval power of South Korea is higher than each of France, the UK and Turkey, and the airpower of South Korea is higher than each of these three countries and also Japan. South Korea has more than 1.500 aircraft and 250 navy vessels that most of which are modern systems. The economic score of South Korea is also high in comparison with the countries in the same category. For example, the economic score of South Korea is higher than all European military powers except Germany.

Japan is presented at ahead of South Korea in some indexes. This is not realistic. Japan is only ahead of South Korea in naval military capabilities in the context of military capabilities. The two countries are almost equal in air power comparison. Japan's advantages against the South Korea are naval power, economy and logistics scores. Table-7 and Graphic-2 below shows the distribution of South Korea's military power elements.



Country	Total Military Power Score	Military Capabilities Score					Human Power Score	Economy Score	Logistics Score	Defence Industry Score	Geo-politics Score
		Land Military Systems Score	Naval Military Systems Score	Air Military Systems Score	Other Military Systems Score	Total Military Systems Score					
South Korea	4.712	1.187 25 %	501 10 %	528 11 %	685 15 %	2.901 61 %	1.032 22 %	214 5 %	83 2 %	328 7 %	154 3 %

\* Table-7; South Korea Military Power Score



\* Graphic-2; Distribution of South Korea's Military Power Elements

## 5. FRANCE, JAPAN, TURKEY AND UNITED KINGDOM

The scores of France, Japan, Turkey and the UK are very close to each other. Each country has different strengths than others. Table-8 and Table-9 below provide a comparison of the power elements and capabilities of these four countries.

	Total Military Power Score	Land Military Systems Score	Naval Military Systems Score	Air Military Systems Score	Other Military Systems Score	Total Military Capabilities Score	Human Power Score	Economy Score	Logistics Score	Defence Industry Score	Geo-politics Score
01	France 4.468	Turkey 880	Japan 707	Japan 505	UK 1.860	France 3.020	Turkey 374	Japan 456	Japan 335	France 620	Turkey 332
02	Japan 4.118	Japan 385	France 398	France 503	France 1.765	Turkey 2.892	Japan 292	France 175	UK 136	UK 527	UK 308
03	Turkey 4.065	France 354	UK 372	Turkey 486	Turkey 1.230	UK 2.837	France 253	UK 122	France 126	Turkey 300	France 274
04	UK 4.031	UK 296	Turkey 296	UK 309	Japan 920	Japan 2.517	UK 226	Turkey 75	Turkey 92	Japan 216	Japan 266

\* Table-8; Military Power Scores of France, Japan, Turkey and UK





	Countries	Tanks	Armoured Vehicles	Aircraft	Fighter/ Interceptor/ Attack Aircraft	Navy Ships	Aircraft and Helicopter Carrier	Destroyer Frigate Corvette	Submarine	Helicopter	Attack Helicopter
01	France	406	6.420	1.057	269	180	4	22	10	432	69
02	Japan	1.004	5.500	1.480	273	155	4	37	20	552	119
03	Turkey	3.045	11.630	1.056	206	149	-	26	12	471	104
04	UK	109	5.500	738	134	88	2	19	11	269	38

\* Table-9; Conventional Capabilities of France, Japan, Turkey and UK (Global Firepower <sup>2</sup>Index Data are used.)

France has distinct military capabilities inclusive of space and owns one of the leading defence industries in the world. The naval and air capabilities of France are relatively large, whereas the land capabilities are small. Assurance of the required readiness and operational capacity across multiple regions with smaller number of forces is the main challenge for France. Therefore, in addition to benefitting from the advantages of being an EU and NATO member, France also attaches utmost importance to global-wide bilateral defence cooperation and partnership initiatives. **Since France Army has fighting capability mainly against the irregular forces, France has developed a new force development and modernization programme to increase the readiness of all conventional forces to counter potential conflict scenarios with states or state groups.** For that purpose, France has started to increase its defence budget gradually. The 40,8 Billion Euro 2017 Defence Budget has become 49,7 Billion Euros in 2021.<sup>3</sup> However, despite all these efforts, it is a possibility that France may lose its 6<sup>th</sup> rank to Japan or Turkey, which both are improving their military capacity very fast.

Japan is just behind France according to the military power score. However, Turkey and UK are ahead of Japan, based on military capabilities ranking (See Table-8). Japan is ahead of France concerning land, naval and air capabilities and also economy and logistics scores. Only two factors leave Japan behind France. The first is the other military capabilities, and the second is the defence industry. As part of other military capabilities, Japan's score in ballistic missile, special force, military alliance membership, paramilitary forces like the gendarmerie, overseas bases and operational experience factors are low. Japan's other military capabilities score is lower than Turkey's and UK's score too (See Table-8). **Japan is an industry giant, but surprisingly its defence industry is a small sector.** Capable of manufacturing armoured vehicles, canons, aircraft and navy ships, and meeting an important portion of national defence requirements, Japan Defence Industry is not among the top 20 arms exporters and has only one defence company in top 100. There are three reasons for that. First, export restrictions based on the interpretation of the post-WW2 Japan Constitution, second over military dependence on the USA and third the belief that the defence industry is not a profitable sector. There is, however, a sharp rise in the Japan Armed Forces and Defence Industry in recent years against the increased China threat. The military rise of Japan, an ally of the West, not only raises concerns by its adversaries but also other Western Allies in the Asia-Pacific due to the 2nd WW experiences.

Turkey, located in a very special region, has always had a large Armed Force due to geopolitical and historical reasons. **The land force of Turkey - a country that faces symmetric and asymmetric**

<sup>2</sup> Global Firepower 2021, <https://www.globalfirepower.com/>, 26 May 2021

<sup>3</sup> HARKUL Mediterranean Defence Report: France Defence Analysis, February 2021, <https://harkul.com.tr/wp-content/uploads/2021/02/HARKUL-Mediterranean-Defence-Report-France-Defence-Analysis-15-February-2021.pdf>, 26 May 2021



**threats both from the East and West - ranked 6<sup>th</sup> in the world and is larger than the Indian Army.** That is because Turkey has outnumbered armoured vehicles, artillery and MLRSs than India. **Turkey has also grown its naval power with national productions in recent years.** With the completion of ongoing projects, Turkey will likely overtake Italy and reach France and UK naval score within the next three years. Turkey, which is one of the manufacturing partners of F-35 Aircraft, encountered US attempt to be removed from the F-35 project due to the purchase of S-400s from Russia. Therefore F-16s continue to be the main fighter aircraft of the Turkish Air Force. **Although Turkey has not yet been able to add the fifth-generation aircraft in its inventory, the Turkish Air Force holds its 8<sup>th</sup> airpower rank with high numbers of aircraft and highly capable Armed UASs in the inventory.** The uncertainty on Turkey's purchase of fifth-generation aircraft continues. Turkey aims to elevate its airpower capability within ten years with its indigenous aircraft production project. A NATO member, Turkey, has very high operational experience and has overseas military bases in 13 countries. **Based on these,** Turkey has a high other military capabilities score. The imposed political barriers in the arms transfers to the NATO member Turkey by the Western countries have resulted in the creation of Turkey's self-sustainable defence industry. Meeting almost 80% of its defence requirements by the national defence industry, Turkey has become the 13<sup>th</sup> defence exporter particularly with the exports in recent years.<sup>4</sup> Seven Turkish defence companies managed to take part among the top 100 global defence companies in 2020. Although Turkey has a high score in military capabilities, its economy and logistics scores are low compared to the same class of military powers. The low economy score is related to the GDP, Foreign Exchange Reserves and Defence Budget. Turkish 2020 Defence Budget was 17,7 Billion USD (UK 59,2, France 52,7 and Japan 49,1) .

The United Kingdom has a small but highly-capable Armed Force. Although the UK Army is the 21<sup>st</sup>, Navy 8<sup>th</sup> and Air Force is 13<sup>th</sup> in the ranking, the 9<sup>th</sup> overall military power rank of UK is related to other military capabilities and national power elements scores (See Table-5 and 8). **With sophisticated air-missile defence and ballistic missile capabilities, highly experienced special forces and marines, military alliance and cooperation initiatives, overseas military bases in 26 countries, competent officer corps and high operational experience, UK has the second-highest other military capabilities score after the USA.** In the context of national power elements that support the military, UK has a high defence industry score. However, the defence export of UK, which is still the 6<sup>th</sup> largest exporter, has dropped 27 % in the last five years.<sup>5</sup> Although the UK Defence Budget, which increased in recent years, is higher than Japan and France Defence Budgets, the economy score of the UK is behind these countries. The UK will likely maintain its 9<sup>th</sup> rank in the short and mid-terms. However, because of its limited resources and the rising military powers in the list, it will not be possible to remain in the top 10 in the long term.

## 6. WHY BRAZIL IS NOT AMONG THE TOP 10?

Brazil, the 6<sup>th</sup> highly populated and 9<sup>th</sup> largest economy, is presented within the top 10 military powers in some indexes. That is probably because a high coefficient applied to the respective national power elements criteria, which are not much relevant in support of military power today. The military capabilities of Brazil are low and limited compared to the countries in the top 10. Brazil Army rank is

<sup>4</sup> Trends in International Arms Transfers -2020, SIPRI Fact Sheet, March 2021, [https://sipri.org/sites/default/files/2021-03/fs\\_2103\\_at\\_2020.pdf](https://sipri.org/sites/default/files/2021-03/fs_2103_at_2020.pdf), 26 May 2021

<sup>5</sup> O.c.



27<sup>th</sup>, Navy 22<sup>nd</sup>, Air Force 17<sup>th</sup> and other military capabilities are 23<sup>rd</sup> (See Table-5). The factors that place Brazil on the 15<sup>th</sup> military power rank are indeed the national power elements rather than military capabilities. Thus the military capabilities of Brazil constitute only 36 % of its overall military power score (See Table-3). The military capability and military power scores of France, Japan, Turkey, the UK and Brazil are presented in the Tables below. Brazil, a growing economy, has a defence budget of 30 Billion US Dollars. The defence and aviation sector in Brazil is booming and aiming at the South American market. Brazil started joint production of SAAB Gripen jets with Sweden in 2020, which the Gripen jets originally were purchased by Brazil from Sweden earlier.<sup>6</sup> Brazil, a leading manufacturer of merchant ships in the 1970s and having faced a sharp decline in the 1980s and 1990s, has revitalized the sector starting from the 2000s. Brazil has managed to transfer its merchant ships experience into the military field with the recent production of submarines and corvettes. Brazil has a vision of becoming a global player with the enlargement of its military power. However, it is not likely that Brazil will become a global military power within the next ten years due to political, economic and structural reasons.

	Countries	Tanks	Armoured Vehicles	Aircraft	Fighter/ Interceptor/ Attack Aircraft	Navy Ships	Aircraft and Helicopter Carrier	Destroyer Frigate Corvette	Submarine	Helicopter	Attack Helicopter
01	France	406	6.420	1.057	269	180	4	22	10	432	69
02	Japan	1.004	5.500	1.480	273	155	4	37	20	552	119
03	Turkey	3.045	11.630	1.056	206	149	-	26	12	471	104
04	UK	109	5.500	738	134	88	2	19	11	269	38
05	Brazil	439	2.000	676	120	112	1	9	6	177	12

\* Table-10; Military Capabilities of France, Japan, Turkey, UK and Brazil (Global Firepower <sup>7</sup>Index Data are used.)

	Total Military Power Score	Land Military Systems Score	Naval Military Systems Score	Air Military Systems Score	Other Military Systems Score	Total Military Capabilities Score	Human Power Score	Economy Score	Logistics Score	Defence Industry Score	Geo-politics Score
France	4.468	354	398	503	1.765	3.020	253	175	335	620	274
Japan	4.118	385	707	505	920	2.517	292	456	126	216	266
Turkey	4.065	880	296	486	1.230	2.892	374	75	92	300	332
UK	4.031	296	372	309	1.860	2.837	226	122	136	527	308
Brazil	2.853	140	147	239	500	1.026	631	164	322	120	590

\* Table-11; The Military Power Score of France, Japan, Turkey, UK and Brazil

<sup>6</sup> Brazil starts producing Swedish Gripen jets, Defense News, July 7, 2020, <https://www.defensenews.com/global/the-americas/2020/07/07/brazil-starts-gripen-production/>, 28 May 2021

<sup>7</sup> Global Firepower 2021, <https://www.globalfirepower.com/>, 22 Mayıs 2021





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