Value-driven economic and military decision-making:

South Korea's arms exports to the EU and NATO

Seong Hyeon Choi • Gary Ng • Martin Šebeňa • Thomas Chan

CEIAS

Value-driven economic and military decision-making:

South Korea's arms exports to the EU and NATO

Authors: Seong Hyeon Choi, Gary Ng, Martin Šebeňa, Thomas Chan

CEIAS

Content

Executive summary

1 South Korea's defense export sector has experienced **rapid growth in recent decades.** Since the 1970s, the constant military threat from North Korea has driven the country's **efforts to indigenize arms production as an alternative to solely relying on US supplies**. Subsequent development and licensing of foreign military technology, along with stable relationships with Western allies and government support, have **elevated the country's defense industry to a globally competitive position**. Meanwhile, the 2022 Russian invasion of Ukraine has shifted the geopolitical landscape, **prompting the EU and NATO to enhance their defense capabilities independently and to gradually diversify away from their reliance on US defense contributions**.

2 **European militaries prefer to acquire arms from NATO member states and other like-minded countries**; decision-makers prefer engagement based on their shared ideological and political values over others in response to perceived geopolitical threats. This and the surge in demand since 2022, which has outpaced Europe's domestic production capacity, presents **an opportunity for South Korea's defense industry.** Value-driven economic and military collaboration with South Korea offers **an alternative to established suppliers such as the United States or Germany**.

3 An analysis of weapons delivery trends shows **a global increase in orders for South Korean arms** that can be attributed to competitive pricing and Seoul's strategic geopolitical alignment with the US-EU camp. South Korea's share of **global arms transfers rose significantly from 2% in the 1990s and 2000s to 8% between 2019 and 2023, surpassing Russia and France**. The growth was driven by artillery and armored vehicles, reflecting **strong demand for land-based weapons used in the Russia-Ukraine war** and South Korea's well-developed supply chains. Additional growth areas include missiles and aircraft, where South Korea is gaining cost-effective comparative advantages.

4 This research begins by analyzing **South Korea's position in the global arms trade and then focuses on the four growth-driving weapons systems**: artillery, armored vehicles, missiles, and aircraft. While the United States remains the world's leading arms exporter, South Korea's rapid rise highlights new opportunities and evolving procurement dynamics in global military exports, **emphasizing the importance of decision-making based on compatible democratic values in this sensitive industry**.

5 Although China—ranking seventh in global arms exports with a 5% market share—is a potential competitor in the Asia-Pacific, particularly in artillery and armored vehicles, **South Korea's alignment with liberal democratic values is something Beijing cannot compete with**. Despite Europe's trade dependencies on China, no EU or NATO member state uses Chinese weapon systems.

6 To ensure sustainable security amid global political uncertainties, **Europe should pursue greater autonomy in arms transfers and diversify its supply sources** beyond traditional suppliers like the United States and Germany. This includes imports from aligned countries like South Korea. **Increasing European domestic production through increased investment and licensing** is also crucial. Meanwhile, continued investment in research and development will help South Korea maintain its competitive position in the arms industry, yet collaboration with European partners and commercial banks and the potential establishment of factories in Europe are recommended.

Introduction

Following Russia's full-scale invasion of Ukraine in 2022, rising strategic uncertainties in Europe have prompted EU and NATO member states to break away from post-Cold War policies that favored maintaining moderate war preparedness. The escalating geopolitical risks have highlighted the urgent need to revamp Europe's defense industrial base to meet the skyrocketing demand for arms. As the EU develops its concept of strategic autonomy, supply-chain security in the defense industry is essential, particularly given the evolving geopolitical risks in related areas such as semiconductors. According to the official definition, "strategic autonomy" refers to "the capacity of the EU to act autonomously—that is, without being dependent on other countries—in strategically important policy areas."[1]

This paper argues that Europe's strengthening ties with South Korea's defense industry reflect how new geopolitical realities have reinforced value-driven economic and military decision-making. Decision-makers increasingly prefer engagement with like-minded states based on shared ideological and political values in response to perceived threats. As defense acquisition and procurement now carry more significant political implications, building military power to address physical security concerns is only part of the equation; ideological alignment also plays a crucial role. Therefore, the question of strategic autonomy extends to how European states can diversify their source of arms purchases.

We propose that South Korea, a democratic ally, is one of the few military-technology powerhouses that can be an alternative and reliable source of arms for Europe. As a US-allied liberal democratic state that has supported Ukraine since the outbreak of war in February 2022, South Korea can play a key role in diversifying European military procurement. In light of growing geopolitical risks, analyzing how South Korea and the European states can collaborate to create synergies that mutually enhance economic security, especially in purchasing weapons, is crucial. Given the strategic and political risks associated with engaging authoritarian states, the European defense supply chain is likely to exclude them, favoring increased cooperation with like-minded democracies instead.

This paper is structured as follows. First, it reviews South Korea's defense industrial base and explains how the threat from North Korea and close collaboration with Western countries have driven the development of its sophisticated domestic defense industrial base. Second, it investigates Seoul's weapons exports to EU and NATO member states between 2004 and 2023, divided

into four five-year periods, and analyzes production and trade data for four major weapons systems—armored vehicles, aircraft, artillery, and missiles. The third section compares South Korea with China, another defense industry powerhouse in the Asia-Pacific, to illustrate how political values increasingly influence economic and military decision-making.

South Korea’s position in the global defense industry

Over the past decade, South Korea has become one of the world’s fastest-growing weapons exporters. According to the Stockholm International Peace Research Institute's (SIPRI) database on arms delivery, South Korea was the tenth largest arms exporter between 2019 and 2023, accounting for 2% of global weapons exports. This represents a 12% increase from 2014-2018, when it held a 1.7% share of international arms sales.[2] As part of Seoul’s goal to become the world’s fourth-largest weapons exporter by 2027, South Korean defense contractors have experienced rapid growth in recent years.[3] Hanwha Aerospace, the country’s largest defense contractor, reported record sales in 2023, worth 9.36 trillion *won* (around $6.78 billion), a 33% increase from the previous year.[4]

South Korea's robust defense industry capabilities and global market success are rooted in three reasons. First, the ongoing threat from North Korea has driven a pursuit of self-sufficiency in defense technology. Before the early 1970s, when Seoul initiated its first steps toward indigenizing its defense industry, the military relied heavily on imported US weapons.[5] As Pyongyang's provocations continued, the need for self-defense capabilities and reduced dependency on foreign suppliers became a priority.[6] Land forces were critical.[7] Given the mountainous terrain of the Korean Peninsula, any armed conflict would likely involve high-altitude attrition warfare, necessitating robust artillery and armored units to secure critical points by neutralizing enemy forces.[8] Consequently, South Korea’s defense industry focused on these land-based platforms, which were also more affordable than air or sea-based systems that require more advanced technology.

Second, Seoul's close ties with the West facilitated the adoption and adaptation of advanced weapons technology. The development of a state's defense industrial base typically follows a gradual progression, beginning with a high reliance on foreign technology, followed by licensed production as the state’s economy and technological capabilities advance.[9] This stage often transitions into limited indigenous development and production of simpler weapons systems, while more complex systems are developed in partnership with foreign companies.[10] Over time, these phases enable the state to design, develop, and manufacture advanced indigenous weapons, such as fighter jets.[11] South Korea exemplifies this development trajectory.[12] Amid rising threats from the communist bloc during the Cold War, Washington strengthened its military and economic support for South Korea, leading to a mutual defense treaty in 1953. As South Korea's economy advanced from light to heavy industry, it led to the growth of *chaebol*—

conglomerates run by an individual or family with multiple diversified affiliates—in the steel, automobile, and chemicals sectors.[13] This industrial growth allowed Seoul to host licensed production for Western defense contractors from the 1970s onwards.[14] Notable achievements include the T-50 Golden Eagle, the country's first indigenous supersonic aircraft co-developed with Lockheed Martin, one of the United States' largest defense and security companies.[15] South Korea also continued developing indigenous military aviation, resulting in its first homegrown 4.5-5.5th generation fighter jet, the KF-21 Boramae, in the 2020s.[16]

Third, domestic demand for land-based forces has supported economies of scale, where higher production volumes lower the cost per unit, allowing manufacturers to offer competitive prices. Regardless of state subsidies, capturing a significant market share typically results in increased revenue, more investment in research and development (R&D), and wider adoption, which, in turn, solidifies market leaders' positions and makes entry more difficult for newcomers.

For example, the South Korean K9 howitzer has competed successfully in the European market against Germany's Panzerhaubitze 2000 (PzH-2000). Although both are 155 mm L52 self-propelled howitzers with comparable size, firing range, and speed, their prices differ significantly. The PzH-2000 costs €18.4 million ($20.1 million) per unit, as indicated by Germany's €184 million deal for ten units in March 2023. By comparison, the K9 appears to be priced at $11.3 million per unit, based on a $2.4 billion deal with Poland signed in August 2022 (for 212 K9s).[17] The price difference comes from the number of domestic orders, in which more domestic orders lowered the cost per unit for exports. There are around 1,100 K9 Thunder self-propelled howitzers produced for domestic inventory in South Korea.[18] In contrast, as of 2024, Germany has only ordered 225 domestic units of PzH-2000, owing to decades of disarmament policy after the Cold War.[19] This price disparity is reflected in their respective shares of the global howitzer market between 2014 and 2023, with the K9 accounting for 74% of sales compared to the PzH-2000's 3%, based on SIPRI Arms Transfers Database calculations.

The convergence of these three factors has driven South Korea's expansion in the European arms market. In 2017, Finland purchased 48 second-hand K9 howitzers for $152 million[20], and Norway signed a $215 million contract to buy 24 K9 howitzers.[21] In July 2022, South Korea signed its largest-ever arms deal worth $12.4 billion, agreeing to sell K239 Chunmoo multi-barreled missile launchers, K2 armored vehicles, K9 self-propelled howitzers and FA-50 light combat aircraft to Poland.[22] In July 2024, Romania signed a $1 billion deal for 54 K9 howitzers and 36 K10 Ammunition Resupply Vehicles.[23] All these European countries have opted to purchase additional units due to the ongoing Russia-Ukraine war, resulting in further contracts with South Korean defense manufacturers.[24]

South Korea’s arms exports and synergies with the EU and NATO

The surge in European orders for South Korean weapons appears to have been driven by South Korea's national identity as a close US ally and one of the few Indo-Pacific countries actively supporting the EU and NATO agenda following Russia’s invasion of Ukraine. Our methodology to demonstrate this and to analyze how South Korea's alignment with European values has boosted its weapons sales involves a cross-country comparison using the trend-indicator value (TIV) compiled by SIRPI to measure the transfer of military capability.[25] Unlike financial value, which measures actual transaction prices and which may increase over time due to inflation and be affected by exchange rate appreciation or depreciation, the TIV provides a standardized measure of arms transfers based on military ability.

This paper examines new orders for offensive weapons systems placed between 2004 and 2023, focusing on artillery, armored vehicles, missiles, and aircraft. Given the land-based nature of the Russia-Ukraine war, there has been a renewed emphasis on the supply of artillery and armored vehicles, supported by missiles and aircraft, including unmanned aerial vehicles (UAVs). The research excludes other weapon categories, such as naval ships or defensive systems.

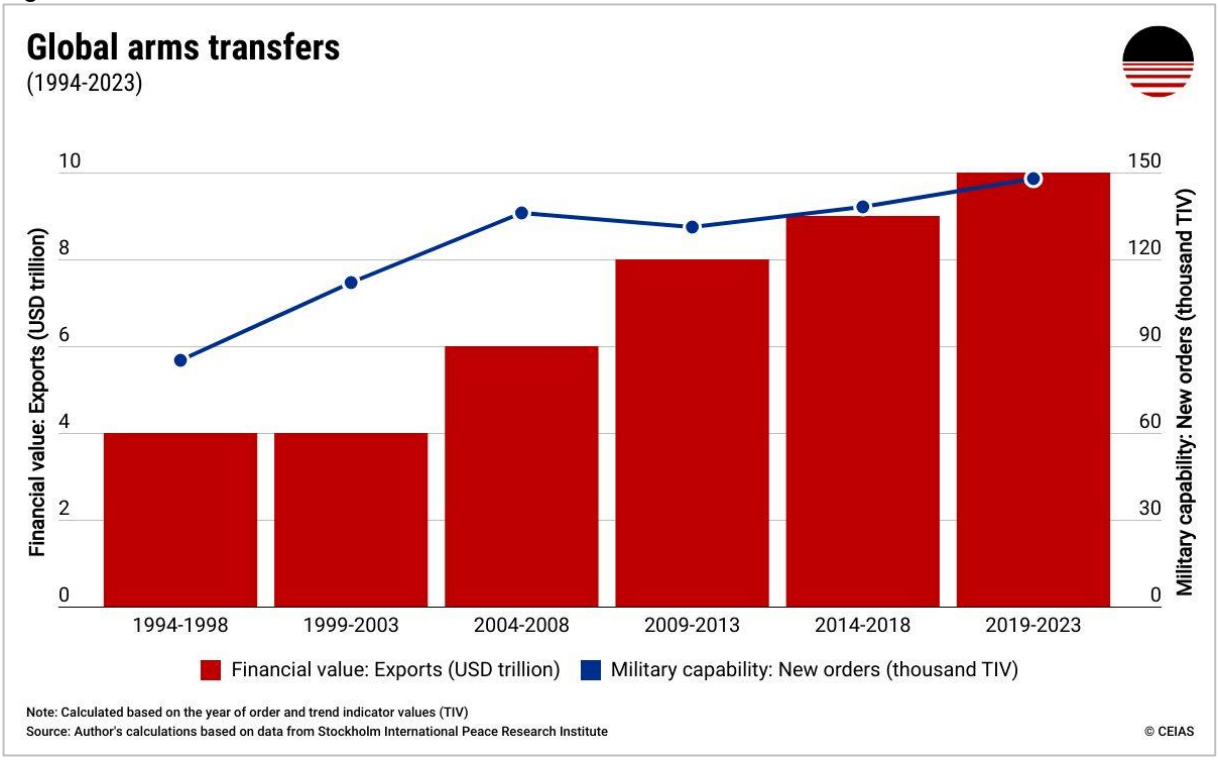
We analyzed data on imports of these four offensive weapons systems from EU and European NATO member states and classified them into three different categories: “like-minded countries”, “opposing states” and “neutral states”. "Like-minded countries" are defined by three criteria: they have a military alliance treaty with the United States; they uphold liberal democracy as a core political principle, characterized by free elections; and they publicly support Ukraine, imposed sanctions on Russia after February 2022, and are listed on Moscow’s "unfriendly countries list.”[26] This group includes all NATO member states (except Turkey) and four Indo-Pacific countries (South Korea, Japan, Australia, and New Zealand). "Opposing states" are those that pursue values antagonistic to the EU's, with authoritarian regimes and defense industrial bases capable of competing with like-minded states. Since most authoritarian regimes are economically isolated or face sanctions, such as North Korea, Iran, and Venezuela, only China and Russia meet these criteria. "Neutral states" do not fit into either of these two categories and include countries like Turkey—a NATO member not on Moscow’s "unfriendly countries list"—and BRICS members such as Brazil, India, and South Africa, which also maintain close relations with the United States.

Rising global demand for arms transfer

Amid escalating US-China competition and the return of armed conflict in Europe triggered by Russia, the international order has increasingly become unstable, leading to persistent interstate arms confrontations. Over the past two decades, global defense spending has surged, reaching $2.4 trillion, an increase of 250%, according to the SIPRI global military expenditure database.[27] In terms of TIV, international arms transfers have been on the rise since 2004–2008 reflecting the reality in Europe and the Indo-Pacific, where heightened geopolitical risks have driven demand for military buildups to counter potential conflicts (Figure 1).

In the Indo-Pacific, China's rise and rapid military expansion have intensified confrontations with Washington's Asian allies. The People's Liberation Army (PLA) has increased its military presence in the Taiwan Strait and the South China Sea.[28] Meanwhile, North Korea's nuclear weapons development has destabilized the Korean peninsula, with Pyongyang conducting an unprecedented number of missile tests—37 in 2022 and 24 in 2023.[29] In Europe, Russia's invasion of Ukraine in February 2022 prompted a paradigm shift, resulting in European states once again prioritizing defense. Germany abandoned its decades-long disarmament policy and has committed to raising its defense budget to at least 2% of GDP, in line with NATO guidelines, from 1.6% in 2023.[30] Finland and Sweden have ended their neutrality and joined NATO in April 2023 and March 2024, respectively.[31]

Figure 1



The ongoing discord in the Indo-Pacific *and* Europe has heightened the risk of disputes over economic security and supply chains as measures to deter adversaries' military advances. Beijing has imposed sanctions on US defense contractors, such as Lockheed Martin and Boeing, for selling weapons to Taiwan, and it has restricted exports of critical minerals like gallium and germanium.[32] In August 2023, the White House banned US companies from investing in areas that would support China's advancement of sensitive technologies—including semiconductors and microelectronics, quantum information technology, and artificial intelligence—citing their connections to China's "military, intelligence, surveillance, or cyber-enabled capabilities," which pose an "unusual and extraordinary threat."[33]

Further complicating the landscape, Russia and North Korea have reportedly reached arms deals, with North Korea supplying ammunition and weapons to support Russian troops in Ukraine in exchange for advanced weapons technology and food. In September 2023, North Korean leader Kim Jong Un visited military facilities in Russia's Far East, and the two countries elevated their bilateral ties to a "comprehensive strategic partnership" during Russian President Vladimir Putin's trip to Pyongyang in June 2024. They pledged mutual military support in case of an attack on either country.[34] This rapprochement, decades after the dissolution of the communist alliance, suggests that the growing risk of great power conflict extends beyond regional disputes to a trans-regional level. As a result, securing alternative sources for military trade has become a central agenda for decision-makers in both Europe and the Indo-Pacific, aiming to enhance cooperation and mitigate risks.

South Korean arms filling demands of like-minded countries

In this context, European NATO countries urgently need to rearm to address the new security environment. This priority comes while the EU and European NATO countries' reliance on US defense support is increasingly conspicuous. When in office, US presidents Barack Obama and Donald Trump urged NATO countries to meet the defense spending target of 2% of GDP, but key members like France and Germany have struggled to reach this threshold and are now struggling to rebuild their defense capabilities. Moreover, the assumption of US defense policymakers that China will be ready to invade Taiwan by 2027 suggests that US military focus may shift primarily to the Pacific region in the second half of this decade. Against this backdrop, NATO leaders like Czech President Petr Pavel have emphasized the need to "[reduce] reliance on the US and developing European strategic enablers." Likewise, former NATO Secretary-General Jens Stoltenberg urged member states to spend beyond the 2% of GDP target.[35]

Despite efforts to accelerate domestic defense output, Europe's production capabilities cannot keep pace with the sudden surge in war-driven demand. EU and

European NATO members were net arms exporters between 2004 and 2018. However, escalating geopolitical tensions, particularly the Russo-Ukrainian war, have resulted in a demand shock for weapons across the region. As such, EU and European NATO members became net arms importers in 2019-2023, reflecting strong domestic demand and a greater reliance on external weapons to rapidly boost defense ability.

Their annual military spending grew by 61% between 2019 and 2023, with their share of global defense spending rising from 16% to 20%. In terms of TIV for military capability, Europe's weapons purchases have tripled, with a significant portion destined for Ukraine. Between 2019 and 2023, some 77% of EU and European NATO members' arms imports were from like-minded countries, up from around 50% in 2009-13. This situation has accelerated the growth of South Korea's arms industry, as it belongs to the small group of like-minded countries that stand out in their ability to meet the military procurement needs of the EU and European NATO members (Figure 2).

Among all suppliers, EU and European NATO members have sourced more arms from the United States and South Korea than from other countries (Figure 3). Between 2019 and 2023, 57% of their arms imports came from the United States, while South Korea ranked second, supplying 16% of arms transfers—double the 8% market share held by Germany.

Figure 2

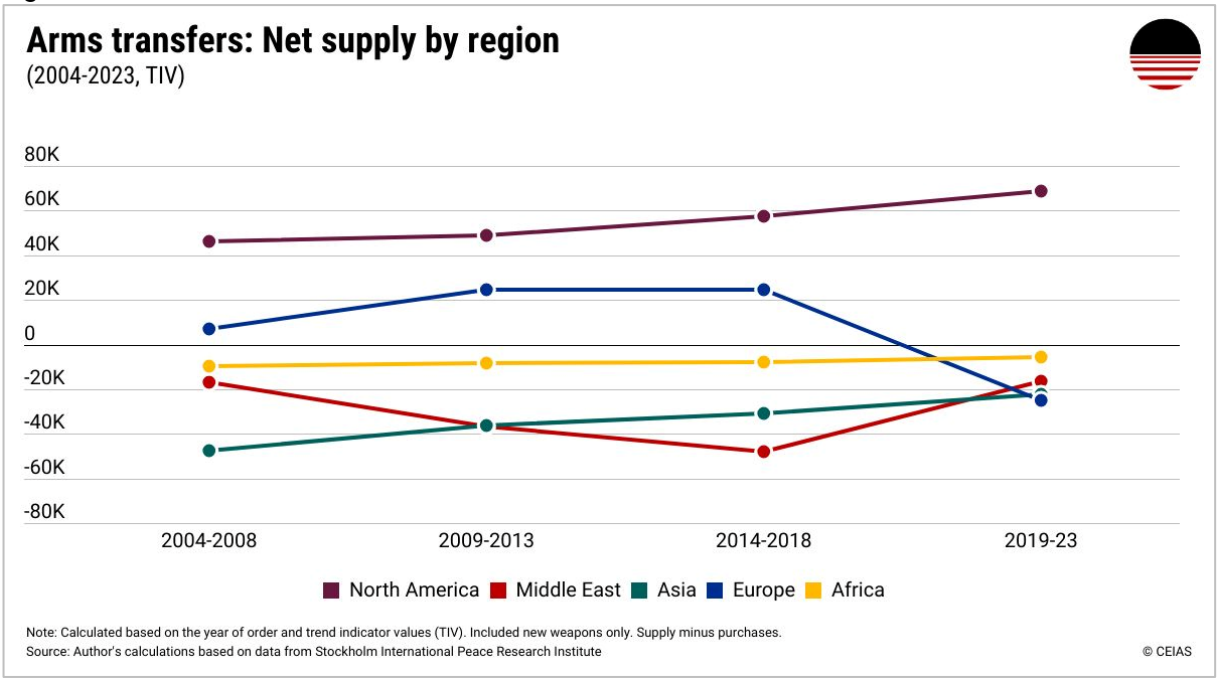


Figure 3

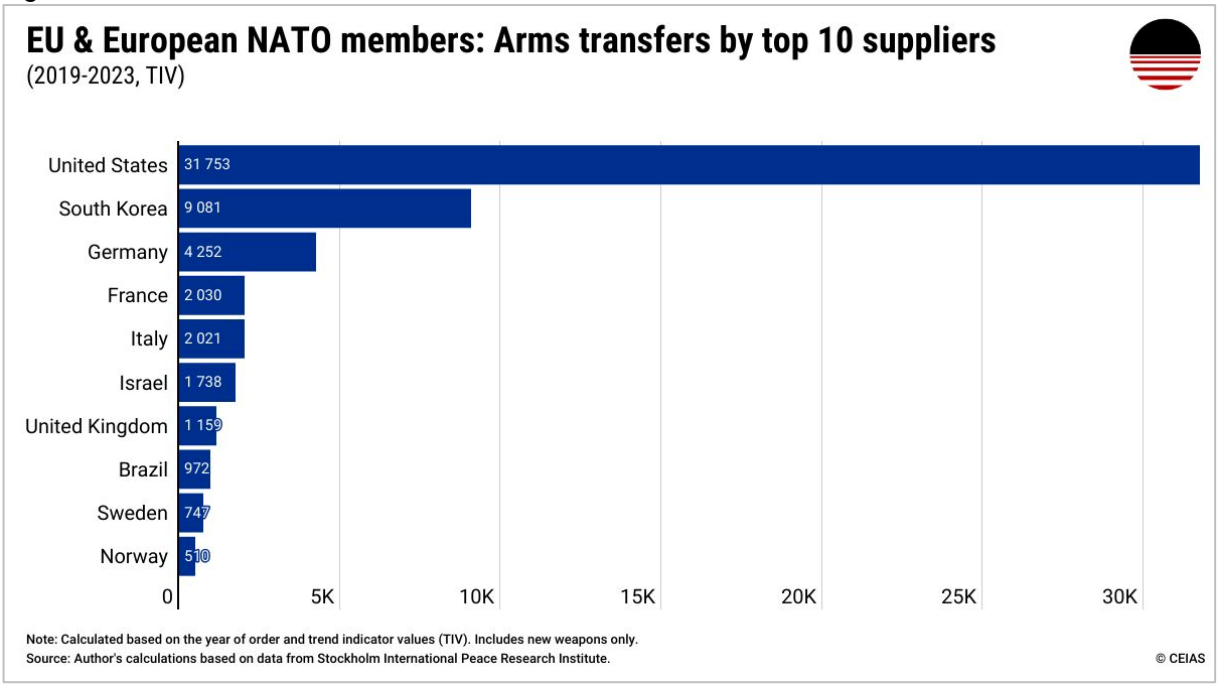
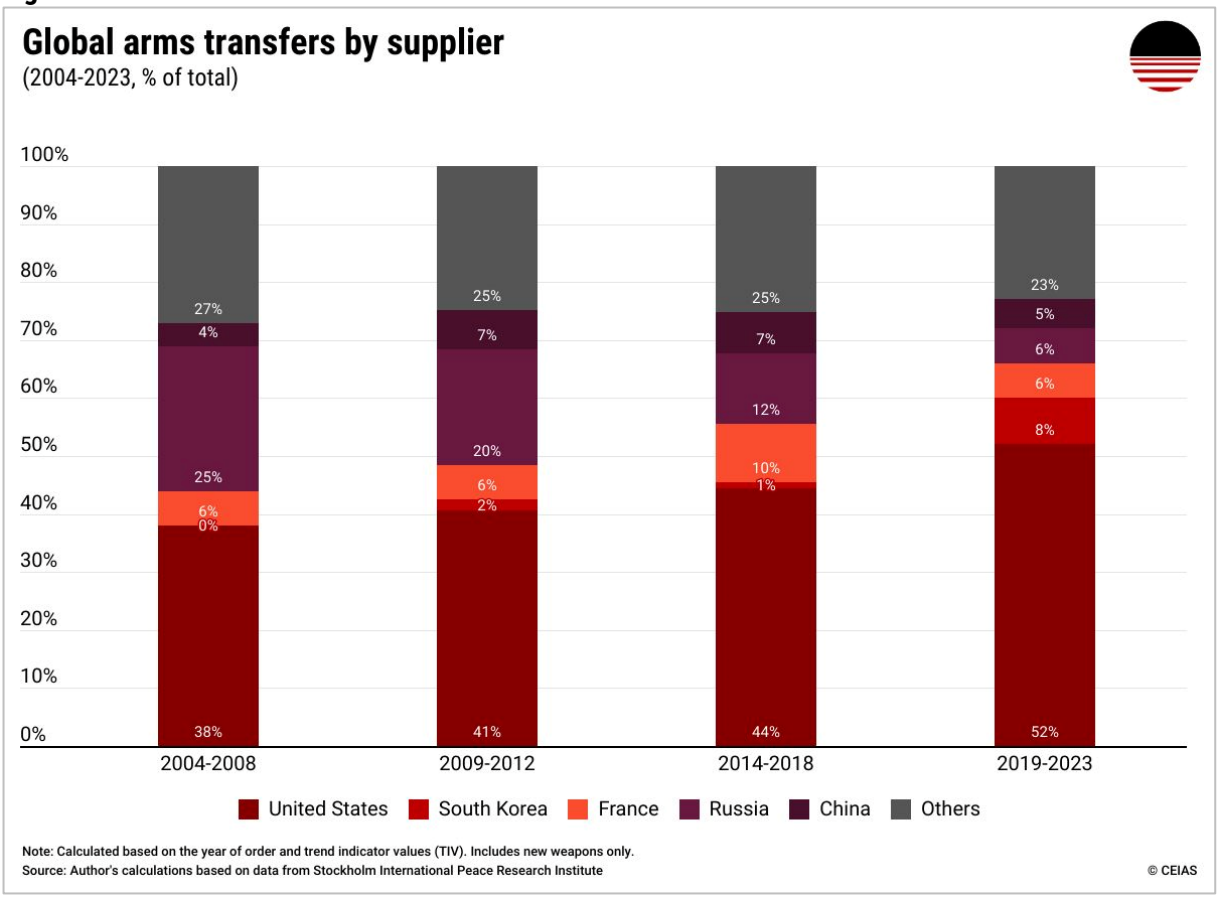


Figure 4



Globally, the United States remains the leading arms exporter, accounting for nearly half of worldwide arms sales. However, South Korea's market share has rapidly climbed to second place between 2019 and 2023 (Figure 4). South Korea surpassed Russia and France, increasing its share of global arms transfers from 2% in previous decades to 8% in 2019–2023.

South Korea boasts well-developed supply chains from heavy industries to semiconductors, which are now integral to arms production, and has competitive advantages in land-based platforms, such as artillery and armored vehicles, and is making significant progress in missiles and aircraft (Figure 5 and 6). Between 2019 and 2023, South Korea secured 75% of global new orders for artillery and 33% for armored vehicles.

Figure 5

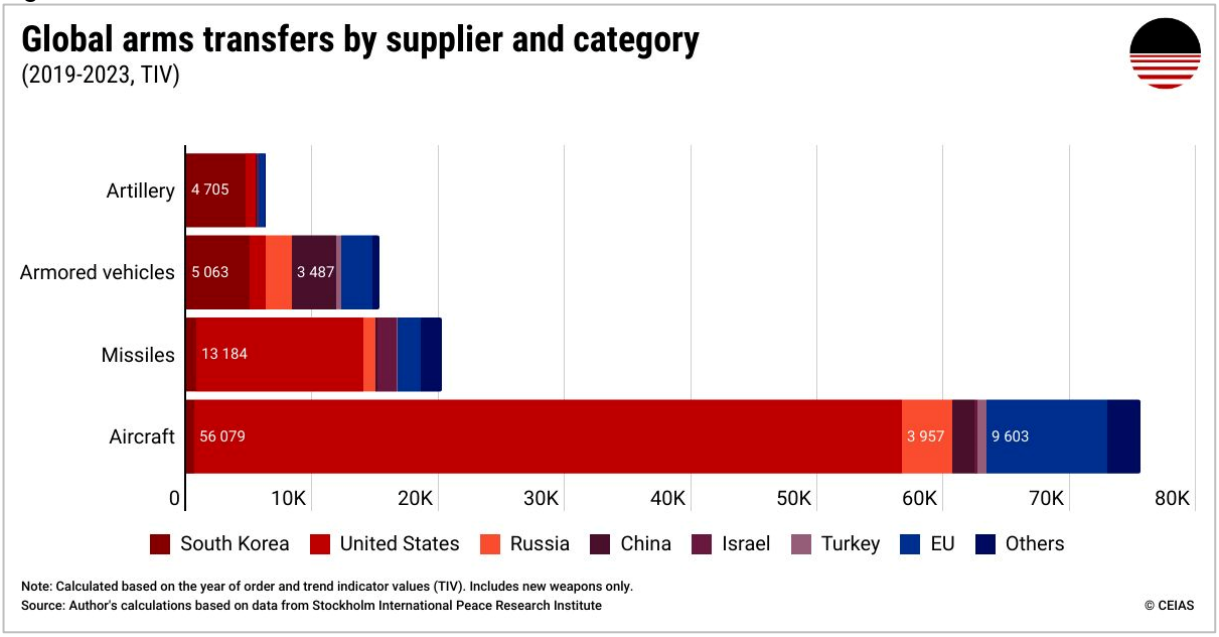
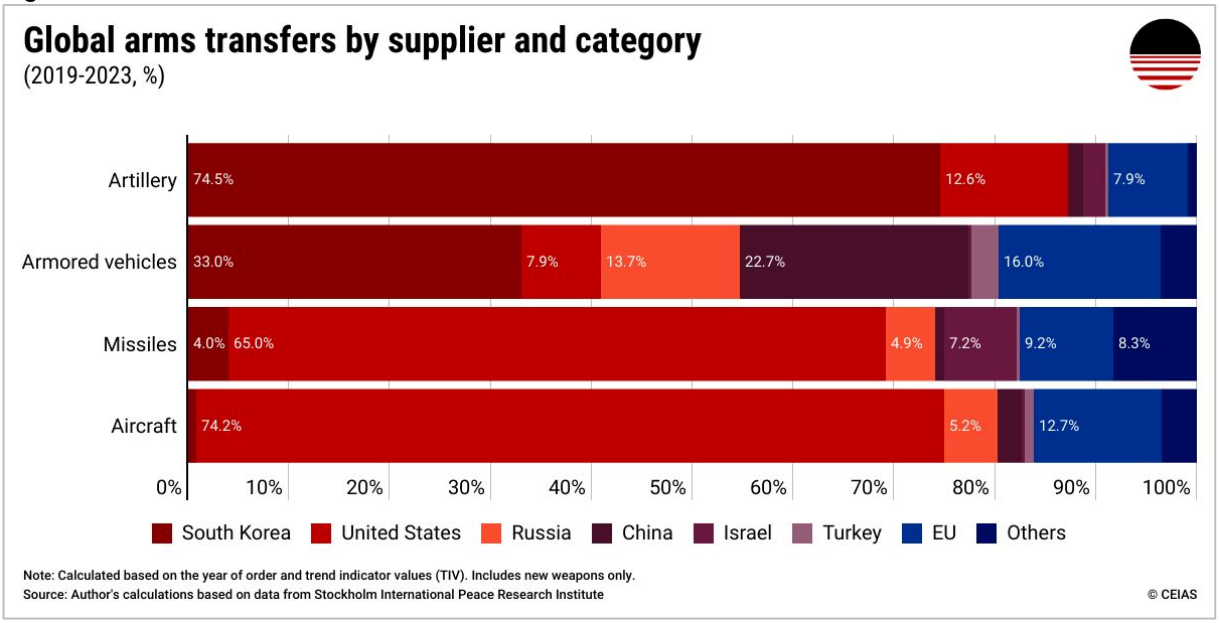


Figure 6



Driven by strong external demand, South Korea's military sector has become a significant new growth source for its economy, with arms sales increasing by 562% between 2014-18 and 2019-23, largely due to deals with Poland—a member of both the EU and NATO (Figure 7). Indeed, Poland accounted for 77% of South Korea's arms transfer in 2019-23, followed by ASEAN states (8%) and Egypt (7%). Most of South Korea's arms transfers consisted of artillery and armored vehicles, particularly the K2 Black Panther armored vehicles and K9 howitzers (Figure 8).

Despite the high concentration risk in South Korea's arms sales to Poland, the overall trend indicates a sustained need for the four major weapons systems. Poland's demand for these weapons is driven by its self-defense needs and support for other countries through the indirect supply of military equipment. For instance, Poland has provided Ukraine with 320 Soviet-era tanks and 14 MiG-29 fighter jets since 2022.[42] The supply chain structure suggests that South Korea can meet the demand of EU and European NATO members. It boasts a higher TIV per unit in artillery and armored vehicles than the global average, although to a lesser extent regarding missiles and aircraft (Figure 9). This indicates that Poland is purchasing weapons in which South Korea holds a comparative advantage in terms of military capability.

Figure 7

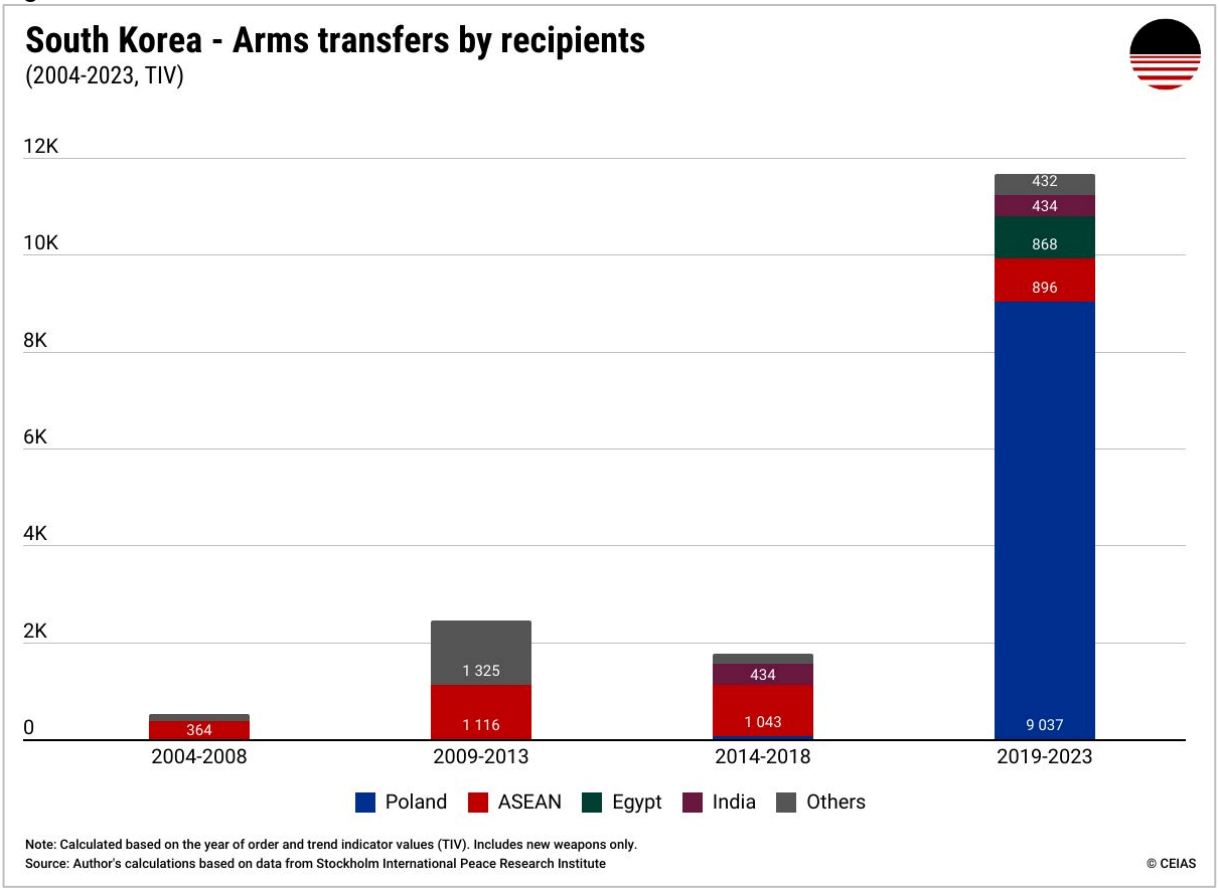

South Korea - Arms transfers by recipients
(2004-2023, TIV)
12K
10K
8K
6K
4K
2K
0
364
1 325
1 116
434
1 043
432
434
868
896
9 037
2004-2008
2009-2013
2014-2018
2019-2023
Poland
ASEAN
Egypt
India
Others
Note: Calculated based on the year of order and trend indicator values (TIV). Includes new weapons only.
Source: Author's calculations based on data from Stockholm International Peace Research Institute
© CEIAS

Figure 8

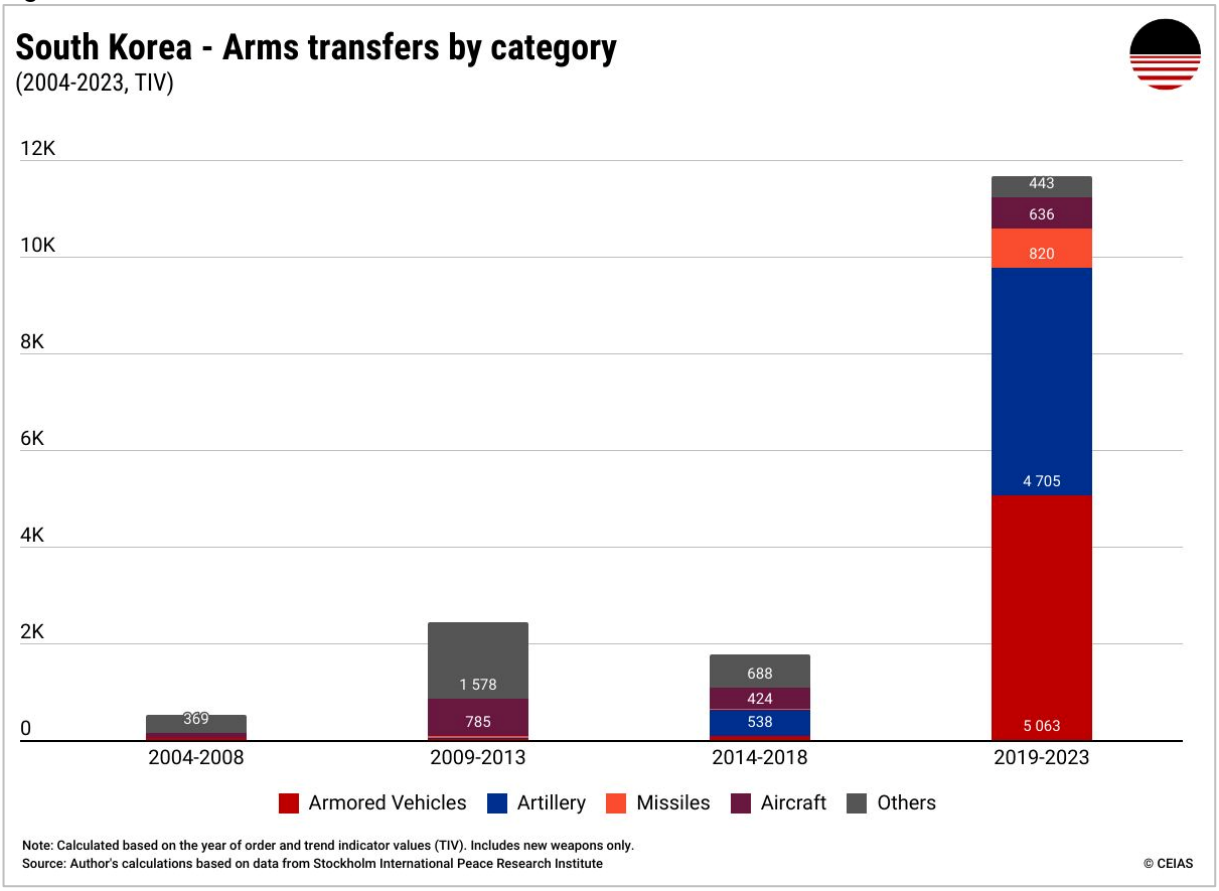
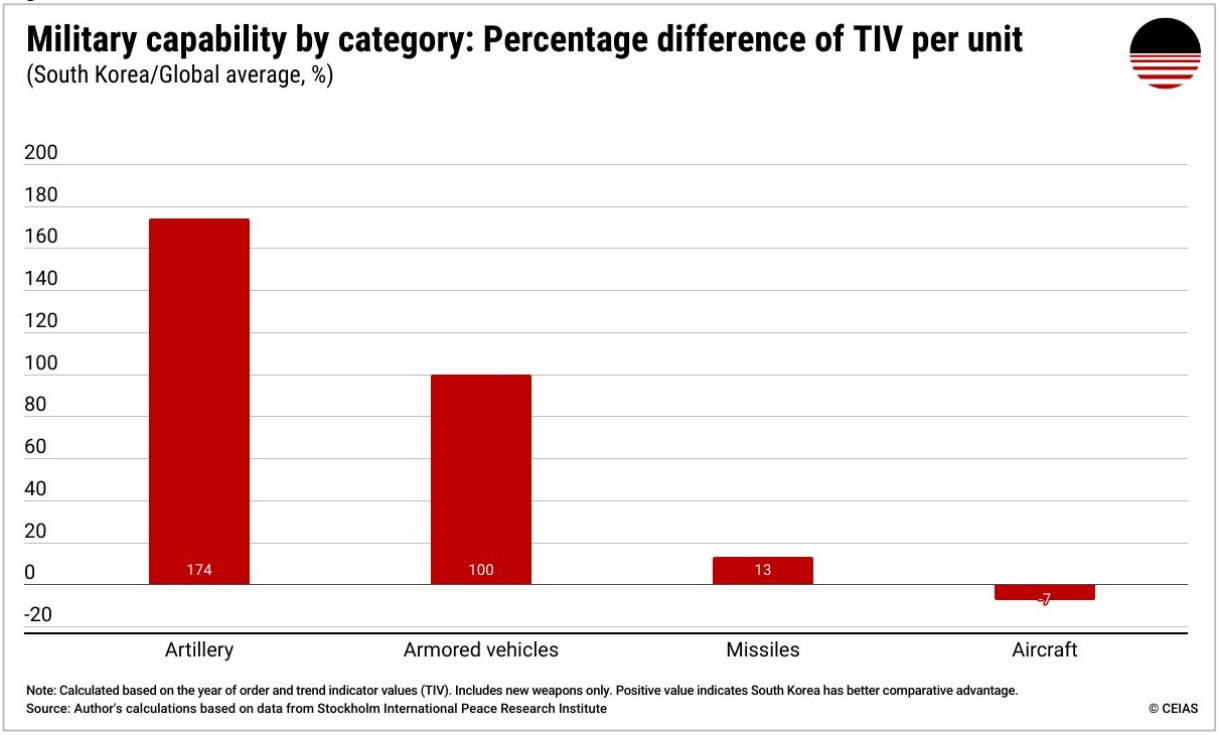


Figure 9



Case study: Poland's growing preference for South Korean arms

Poland's ongoing efforts to procure South Korean defense assets are part of its broader initiative to modernize its defense capabilities and meet NATO guidelines of spending at least 2% of GDP on defense. In fact, in response to the growing security threat from Russia, Poland is allocating significantly more to defense than other European states—it dedicated 3.9% of GDP to defense in 2023, with plans to increase this to 4.7% in 2025.[36]

In 2022, Poland signed its largest-ever arms deal to buttress its defense capabilities and replace the arms it had sent to Ukraine following Russia's aggression. The $14.5 billion deal with South Korea included over 1,600 K2 main battle tanks and K9 howitzers and more than 50 FA-50 light fighter jets.[37] At the time, it was the biggest single sale of South Korean weaponry, and Poland's then-Defense Minister Mariusz Błaszczak remarked that the K2 was "compatible with, or even identical to" the US Abrams.[38]

In addition to importing South Korean arms, Poland is pushing for domestic production. As part of the 2022 deal, South Korea and Poland announced plans to co-develop a new variant of the K9 howitzer, known as the K9PLA3. In June 2024, Poland also agreed to manufacture K2 armored vehicles domestically. Conversely, South Korea is interested in reciprocal arms purchases from Poland to sustain the partnership. Seoul plans to acquire 200 Polish loitering munitions and expand its drone fleet using Polish products.[40]

Despite these developments, Poland continues to procure US defense systems. Following Russia's invasion of Ukraine, Warsaw announced plans to purchase a range of US weaponry, including M1 Abrams tanks and HIMRAS light multiple rocket launchers, which are in the same categories as the K2 and Hanwha Aerospace's Chunmoo rocket artillery system. However, Poland is also acquiring weapons outside the scope of South Korea's offerings, such as Apache and Black Hawk helicopters, Patriot air defense missiles, and the fifth-generation F-35 Joint Strike Fighter.[41] This demonstrates that while US weaponry continues to fulfill certain Polish defense needs, like aerial defense, Warsaw's arms deals with Seoul have solidified South Korea's role as a prominent supplier of land-based weaponry for the country.

China: a potential competitor?

The most significant shift in global arms transfers is the rising demand from Europe and the emergence of Asia as a key supplier. This trend presents new opportunities for countries with comparative advantages in military exports but also underscores the importance of democratic values or friendly diplomatic relationships in arms procurement decisions, given the military industry's sensitivity and the critical nature of supply chain security.

As Andrew J. Pierre noted in *The Global Politics of Arms Sales,* arms sales are not merely commercial transactions; they are political acts shaped by political motives, economic incentives, and security perspectives of bilateral and multilateral relationships.[43] This view highlights how arms deals are inseparable from diplomacy and foreign policy interests, with each transaction likely carrying significant political implications.

South Korea's engagement with European countries has increased in recent years, exemplified by its participation in three consecutive NATO summits from 2022 to 2024.[44] Seoul's 2022 Indo-Pacific strategy also affirmed its "commitment to bolster its partnership with NATO based on the shared values of democracy and the rule of law, and contribute to safeguarding the rules-based international order."[45]

As South Korea continues to enhance its defense capabilities, China emerges as a potential competitor among Asia-Pacific nations. While it ranks as the world's fourth-biggest exporter of arms based on delivered weapons,[46] it falls to seventh place based on future orders for 2019-2023 (Figure 10). Overlapping export products, relaxed domestic restrictions on arms transfer, and favorable financing conditions position China as a competitor to South Korean defense manufacturers, particularly in land-based weaponry—China's major arms exports are also armored vehicles and, to a lesser degree, artillery (Figure 11). In the last five years, South Korea's volume of arms orders has, for the first time, overtaken that of China (Figure 12).

Figure 10

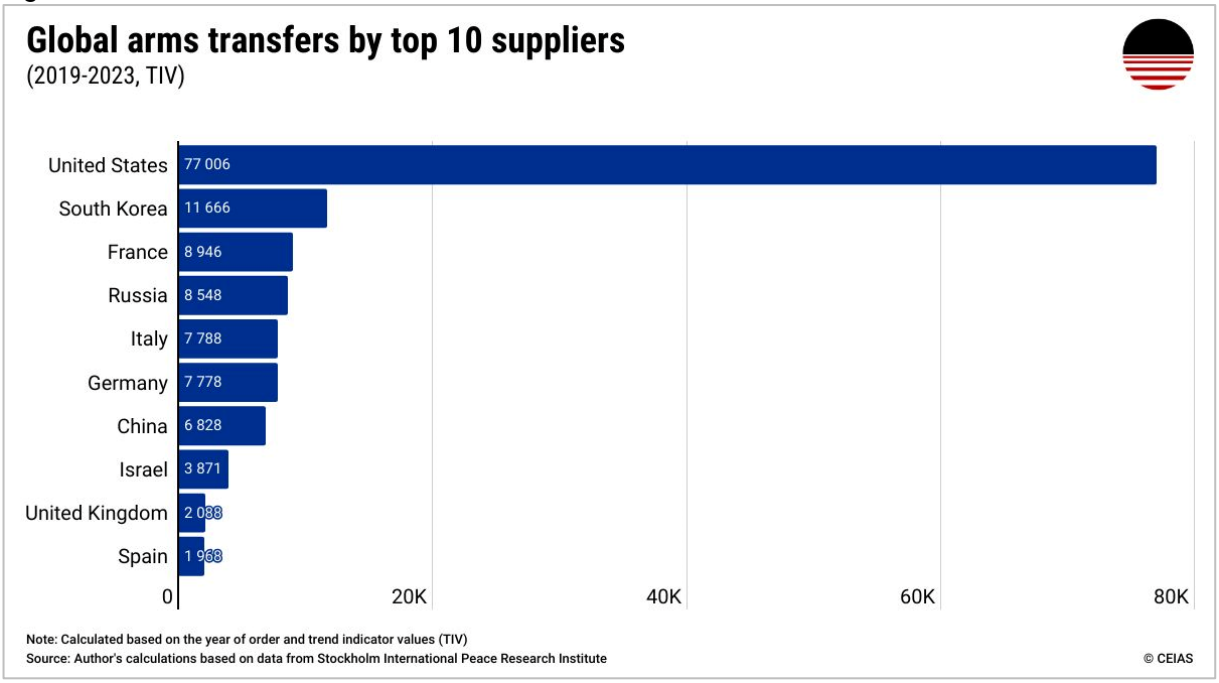
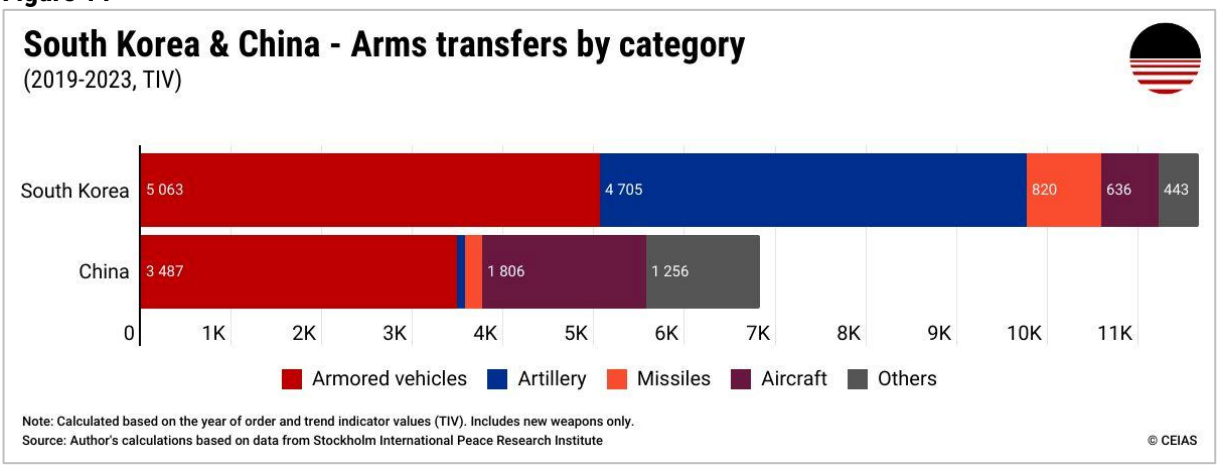


Figure 11



South Korea's military exports are increasingly dominated by artillery and armored vehicles driven by exports to EU and European NATO member states. This trend highlights not only the prominence of South Korea's land-based weaponry but also the influence of value-based military and economic decision-making. In contrast, China's arms exports to the EU and European NATO member states have remained nearly zero (Figure 13).

Compared to China, South Korea's ideological, political, and foreign policy alignment with EU and European NATO member states is stronger, as reflected in the comparison of arms exports (Figure 14). In contrast, China's arms exports are typically directed toward countries with lower scores on the Polity index, a broad measure of democracy. This suggests that values play a significant role in security decisions and weapon purchases. The near absence of Chinese arms exports to

EU and NATO countries is largely due to the ongoing embargo on Chinese weapons, upheld by most European nations.

China's arms exports to European states present a stark contrast to South Korea's. The Russian invasion of Ukraine has raised concerns about China's export of dual-use components aiding Russia. Since 2019, China and Russia have upgraded their relationship to a "Comprehensive Strategic Partnership of Coordination for a New Era," pledging deeper cooperation.[47] Although China has not publicly endorsed Russia's aggression, it maintains normal trade relations, importing oil and gas from Russia and exporting dual-use goods like semiconductors.[48] It is estimated that 89% of Russia's imports of items on the G7's high-priority export control list now come from China, up from 32% in 2021.[49]

Figure 12

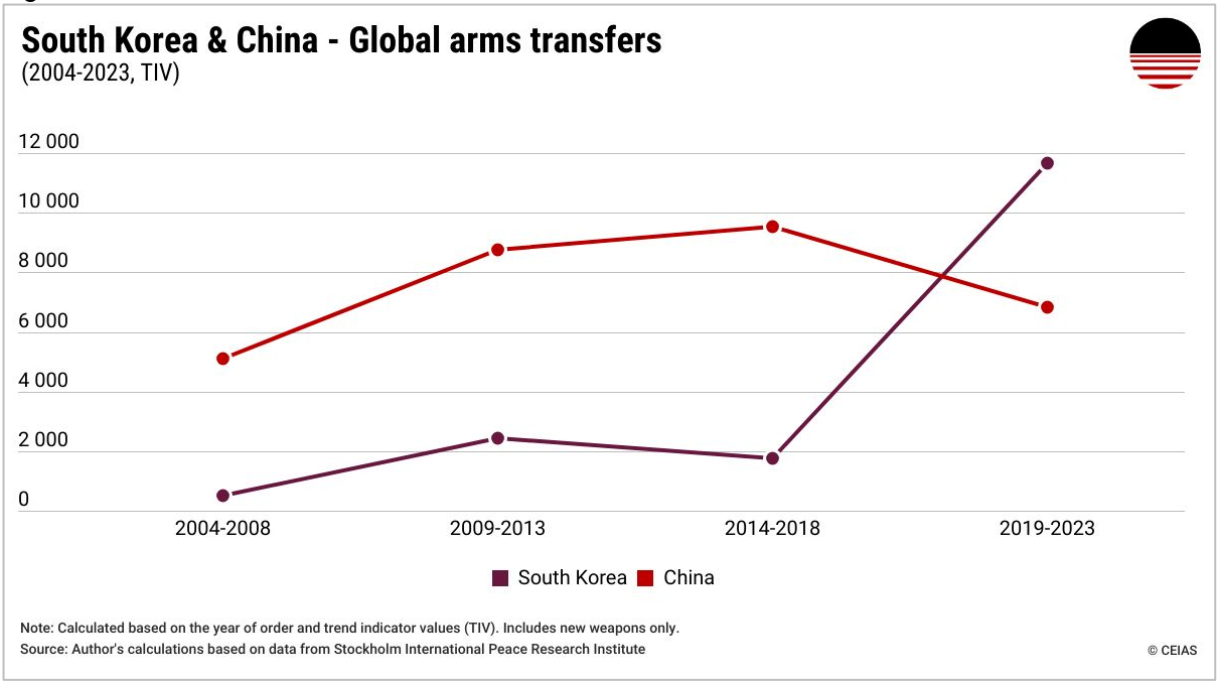


Figure 13

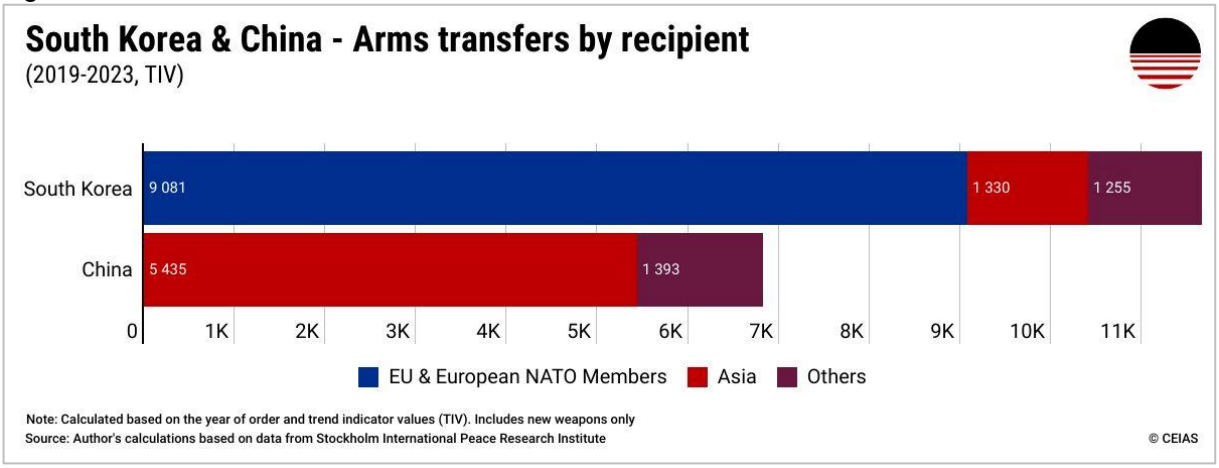
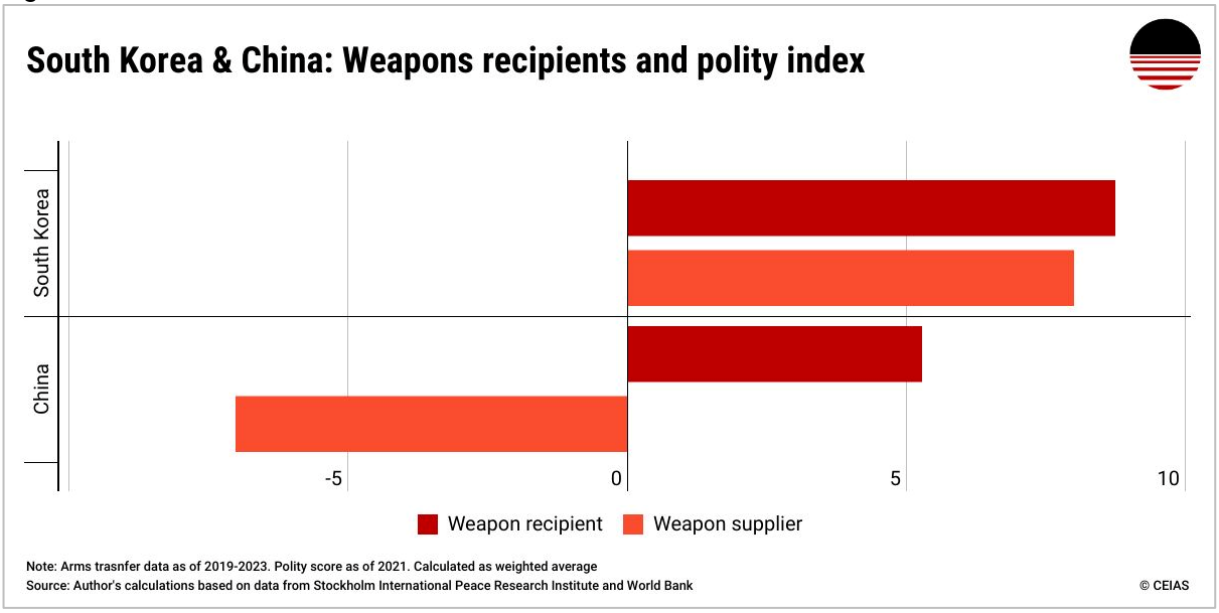


Figure 14



Most European countries have constructed narratives to consolidate cooperation with the United States against Chinese threats and have voiced concerns about China's military buildup in the Taiwan Strait and the South China Sea, which Beijing considers core interests.[50] The divergent values—Europe's emphasis on a liberal democratic agenda and support for the US-led rules-based order versus China's focus on maximizing sovereignty and power while rejecting external interference—are reflected in defense procurement decisions, as military purchases carry significant political and foreign policy implications. Despite their economic dependence on China, no EU or NATO member state operates Chinese weapons systems. Serbia and Russia—non-EU and non-NATO members—are the only European states using Chinese systems. Serbia operates Chinese-made air defense systems, combat drones, and missiles[51], while Russia relies on a large number of Chinese dual-use components that can be weaponized for its invasion of Ukraine.[52]

Hence, the rise of South Korea's defense industry has been driven by increased demand for land-based weapons in Europe and the popularity of its systems like the K2 Black Panther (armored vehicle) and K9 Thunder (artillery), which provide alternatives to US or German counterparts (Figures 15 and 16) while aligning with NATO's democratic core values.

Figure 15

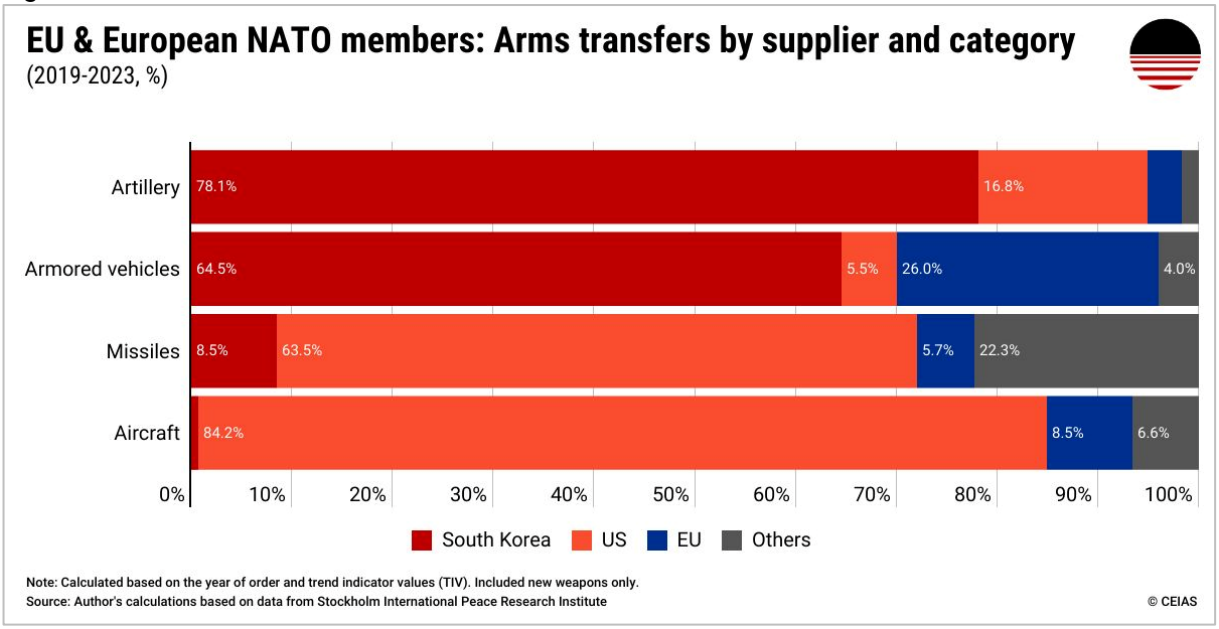
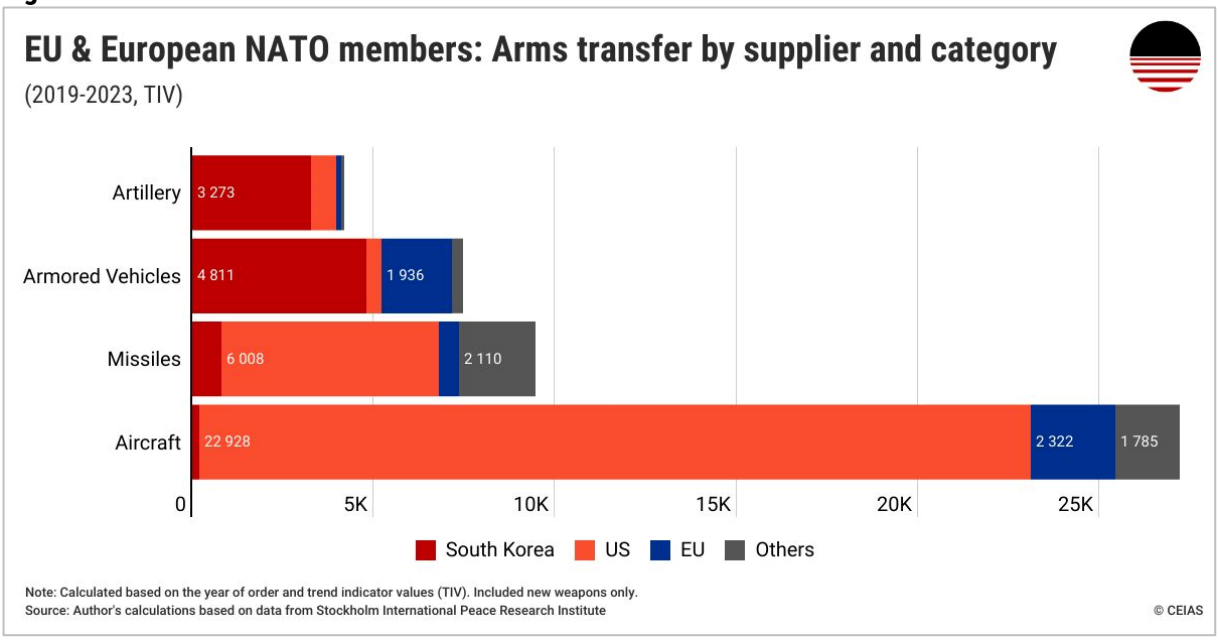


Figure 16



Policy recommendations

South Korea's arms industry has greatly benefited from the growing emphasis on values within the European defense industrial supply chain. As this trend is likely to continue, it is crucial for stakeholders, particularly policymakers and industry leaders, to adopt forward-looking approaches to safeguard defense production capabilities and uphold a value-based foreign policy. Our policy recommendations propose several strategies that would ensure South Korea's defense industry remains competitive and attractive to like-minded nations.

EU and NATO

- **Balancing domestic arms manufacture and import from South Korea:** Prioritizing both domestic arms production and imports is not only a response to the threat Russia poses to Ukraine and Europe; it is also related to unpredictable global political changes. Promoting self-autonomy in arms research, manufacturing, and transfer is a logical choice for ensuring European security. It will facilitate a reliable domestic arms supply while better ensuring a diversified supply of weapons and ammunition within European NATO states in the event of unforeseen tensions. Moreover, Europe should consider further strengthening its defense capabilities through increased investment in domestic production and imports with South Korea. South Korean arms, such as the renowned K9 howitzer and K2 armored vehicles, have gained popularity among European buyers, including Poland, Romania, Finland, and Norway. A similar example outside Europe is the Australian Army's choice of Hanwha's Redback infantry fighting vehicle over Rheinmetall's Lynx. While potential competitors like China, exist, South Korea is a more complementary partner for Europe thanks to shared economic and political values and strategic outlook.

South Korea

- **Continuous R&D:** To maintain its competitive advantage, South Korea should continue to invest in research and development within its arms industry, leveraging existing strengths in land-warfare systems. Traditional European arms suppliers such as France and Germany may compete with South Korea in Europe and other markets, but South Korea retains a price advantage and has demonstrated that its products meet high-quality standards. In addition

to maintaining its scale in traditional land warfare arms, South Korea can also explore expanding its capabilities in aerial warfare, as Central and Eastern European countries replenish their stocks after donating Soviet-era jets to Ukraine. South Korean aircraft, such as the KAI T-50, could offer an effective solution for countries seeking to modernize their air fleets without the high costs associated with fifth-generation fighters. Nations like Poland, Slovakia, and even Malaysia have already purchased or shown interest in this type of aircraft.

- **Better financing solutions:** South Korea's arms manufacturers should strengthen collaboration with policy banks and commercial banks to support buyers' financial needs under reasonable terms. Financial constraints nearly jeopardized the major arms deal with Poland when the Export-Import Bank of Korea (Eximbank) could not extend credit because it had nearly reached its legal cap. This required South Korea's National Assembly to intervene. To avoid such challenges in the future, both the public and private financial sectors in South Korea should develop more flexible financing solutions to assist potential buyers in securing contracts. These measures could include easing legislative restrictions or offering new financial packages.

- **Closer collaboration with buyers:** With the rise of protectionism, there is a risk that European arms manufacturers will perceive South Korea as competing unfairly with local producers, as was the case when some in Poland expressed discontent over importing South Korea's K9 self-propelled howitzers rather than supporting Poland's domestically-made Krab. Additionally, if Ukraine achieves a meaningful and sustainable breakthrough against Russian forces, demand for South Korean arms could decline. To mitigate these risks, South Korea's arms industry should consider deeper integration with its European counterparts. Establishing joint ventures or joint R&D programs with European arms manufacturers or governments could help make the South Korean defense industry an indispensable part of Europe's defense ecosystem. Licensing is another effective strategy. For instance, in June 2024, Poland signed a contract with South Korea to produce 180 K2 tanks under license as part of a broader military agreement, demonstrating the potential to export South Korean military expertise while allowing host countries to retain economic benefits. Furthermore, such collaboration could have spillover effects, accelerating advancements in other critical sectors, such as electric vehicles and batteries.

- **Narrowing the trade surplus if necessary:** As concerns about arms trade deficits increase, South Korea should consider purchasing various types of weapons from Europe if they align with its national defense strategy. The South Korean government's interest in buying Polish Warmate drones is a positive first step. The Russian invasion has accelerated the adoption of asymmetric warfare tactics, including the use of reconnaissance and attack drones. Acquiring relevant hardware from European suppliers could

strengthen South Korea's defense capabilities against potential North Korean threats.

- **Diversification to new sectors:** While maintaining a strong comparative advantage in armored vehicles and artillery is crucial, South Korea should also expand into areas such as aircraft, missiles, and emerging sectors like artificial intelligence and drones for modern warfare. The South Korean defense industry has recently achieved success beyond traditional land-based weaponry, including developing partnerships with Dutch, Brazilian, and French shipyards, selling T-50 fighter jets to countries like Poland, and exploring new sales and manufacturing opportunities in Latin America. Continued diversification can help mitigate risks associated with over-reliance on the European market while also fostering new capabilities to ensure long-term competitiveness.

Endnotes

1. European Parliament. (2022). “EU strategic autonomy 2013-2023: From concept to capacity”. European Parliament. Retrieved July 1, 2024, from https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/733589/EPRS_BRI(2022)733589_EN.pdf.

2. Wezeman, P. D., Djokic, K., George, M., Hussain, Z., & Wezeman, S. T. (2024) “Trends in International Arms Transfers, 2023.” SIPRI. Retrieved July 1, 2024, from https://www.sipri.org/sites/default/files/2024-03/fs_2403_at_2023.pdf.

3. Kim, E. (2023, December 20). “S. Korea’s arms exports amount to nearly $14 bln in 2023”. Yonhap News Agency. Retrieved July 1, 2024, from https://en.yna.co.kr/view/AEN20231220004900315.

4. Hanwha Aerospace. (2024). “Jaemujeongbo [Financial Information]”. Retrieved from https://www.hanwhaaerospace.com/kor/ir/financial-info/finance01.do.

5. Nolan, J. E. (1986). “Military industry in Taiwan and South Korea”. The Macmillan Press Ltd.
Bitzinger, R. A. (1995). “South Korea's defense industry at the crossroads.” The Korean Journal of Defense Analysis, 7(1), 233-249.

6. Nolan, J. E. (1986). “Military industry in Taiwan and South Korea”. The Macmillan Press Ltd.
Bitzinger, R. A. (1995). “South Korea's defense industry at the crossroads”. The Korean Journal of Defense Analysis, 7(1), 233-249.
Lee, Y. S., & Markusen, A. (2003). “The South Korean defense industry in the post-Cold War era”. In From Defense to Development? (pp. 240-269). Routledge.

7. Shim, Y., & Atkinson, M. P. (2018). “Analysis of artillery shoot-and-scoot tactics”. Naval Research Logistics (NRL), 65(3), 242-274.

8. Cordesman, A. H. (2016). “Conventional Military Balance in the Koreas and Northeast Asia”. Center for Strategic and International Studies (CSIS).

9. Bitzinger, R. A. (1995). “South Korea's defense industry at the crossroads”. The Korean Journal of Defense Analysis, 7(1), 233-249.

10. Bitzinger, R. A. (1995). “South Korea's defense industry at the crossroads”. The Korean Journal of Defense Analysis, 7(1), 233-249.

11. Bitzinger, R. A. (1995). “South Korea's defense industry at the crossroads”. The Korean Journal of Defense Analysis, 7(1), 233-249.

12. Bitzinger, R. A. (1995). “South Korea's defense industry at the crossroads”. The Korean Journal of Defense Analysis, 7(1), 233-249.

13. Bitzinger, R. A., & Kim, M. (2005). “Why do small states produce arms? The case of South Korea”. The Korean journal of defense analysis, 17(2), 183-205.
Weitz, R. (2013). “South Korea’s Defense Industry: Increasing Domestic Capabilities and Global Opportunities”. From 2014 On Korea, 7, 43–60. https://keia.org/wp-content/uploads/2020/05/kei_onkorea_2014_final_single_pages.pdf.
Glassman, J., & Choi, Y. J. (2014). “The Chaebol and the US military—industrial complex: Cold War geopolitical economy and South Korean industrialization”. Environment and Planning A, 46(5), 1160-1180.

14. Bitzinger, R. A. (1995). “South Korea's defense industry at the crossroads”. The Korean Journal of Defense Analysis, 7(1), 233-249.

15. Weitz, R. (2013). “South Korea’s Defense Industry: Increasing Domestic Capabilities and Global Opportunities”. From 2014 On Korea , 7, 43–60. https://keia.org/wp-content/uploads/2020/05/kei_onkorea_2014_final_single_pages.pdf.
Bitzinger, R. A. (2019). “The defense industry of the Republic of Korea”. In The Economics of the Global Defence Industry (pp. 378-395). Routledge

16. Chang, D. (2024, June 25). “KAI signs 1.96 tln-won KF-21 production deal with defense procurement agency”. Yonhap News Agency. Retrieved July 1, 2024, from https://en.yna.co.kr/view/AEN20240625003851320.

17. Martin, T. (2023, March 30). “Germany signs $201M contract for 10 PzH2000 howitzers to replenish stocks sent to Ukraine”. Breaking Defense. Retrieved July 1, 2024, from https://breakingdefense.com/2023/03/germany-signs-201m-contract-for-10-pzh2000-howitzers-to-replenish-stocks-sent-to-ukraine/.
Prus, L. (2024, April 14). “Hanwha strengthens cooperation with Polish industry in K9 howitzer programme”. Defence Industry Europe. Retrieved July 1, 2024, from https://defence-industry.eu/hanwha-strengthens-cooperation-with-polish-industry-in-k9-howitzer-programme/.

18. Saballa, J. (2022, November 15). “South Korea to Double Range of K-9 Self-Propelled Howitzers”. The Defence Post. Retrieved September 28, 2024, from https://thedefensepost.com/2022/11/15/south-korea-k-9-self-propelled-howitzers/.

19. Kadam, T. (2022, April 23). “Meet Panzerhaubitze 2000 – The ‘Heavy-Duty Monster’ That Ukraine Could Get To Battle Invading Russian Forces”. The EurAsian Times. Retrieved September 28, 2024, from https://www.eurasiantimes.com/panzerhaubitze-2000-the-heaviest-warfare-machine-that-ukraine/.

20. Kim, H. (2017, March 2). “S. Korea, Finland sign weapons deal”. Yonhap News Agency. Retrieved July 1, 2024, from https://en.yna.co.kr/view/AEN20170302008800320.

21. Yeo, M. (2017, December 20). “Norway orders K9 howitzers in latest win for South Korean arms industry”. Defense News. Retrieved July 1, 2024, from https://www.defensenews.com/land/2017/12/20/norway-orders-k9-howitzers-in-latest-win-for-south-korean-arms-industry/.

22. Kim, E. (2024, April 22). “Polish delegation visits S. Korea amid negotiations for arms deals”. Yonhap News Agency. Retrieved July 1, 2024, from https://en.yna.co.kr/view/AEN20240422007600315.

23. Helou, A. (2024, July 10). “Romania buying $1B in K9 and K10 artillery systems from Hanwha Aerospace”. Breaking Defense. Retrieved July 1, 2024, from https://breakingdefense.com/2024/07/romania-buying-1b-in-k9-and-k10-artillery-systems-from-hanwha-aerospace/

24. Janes. (2022, November 24). “Finland exercises option for 38 more K9 SPHs”. Janes. Retrieved July 1, 2024, from https://www.janes.com/osint-insights/defence-news/land/finland-exercises-option-for-38-more-k9-sph.
Saballa, J. (2022, November 9). “Norway Buys More K9 Howitzers, Armored Vehicles From S. Korea”. The Defense Post. Retrieved July 1, 2024, from https://www.thedefensepost.com/2022/11/09/norway-howitzers-armored-vehicles-south-korea/.
Reuters (2024, June 20). “Poland likely to sign another arms deal with S.Korea, minister says”. Reuters. Retrieved July 1, 2024, from https://www.reuters.com/world/poland-likely-sign-another-arms-deal-with-skorea-minister-says-2024-06-20/.

25. Holtom, P., Bromley, M. & Simmel, V. (2022). “Measuring International Arm Transfers”. SIPRI. https://www.sipri.org/sites/default/files/files/FS/SIPRIFS1212.pdf.

26. Al Jazeera. (2022, March 8). “Russia issues list of ‘unfriendly’ countries amid Ukraine crisis”. Al Jazeera. Retrieved July 1, 2024, from https://www.aljazeera.com/news/2022/3/8/russia-deals-with-unfriendly-countries-require-moscow-approval.

27. Tian, N., Da Silva, D. L., Liang, X., & Scarazzato, L. (2024) “Trends in World Military Expenditure, 2023.” SIPRI. Retrieved July 1, 2024, from https://www.sipri.org/sites/default/files/2024-04/2404_fs_milex_2023.pdf.

28. Center for Preventive Action (2024). “Confrontation over Taiwan”. Council on Foreign Relations. https://www.cfr.org/global-conflict-tracker/conflict/confrontation-over-taiwan.

29. Center for Strategic and International Studies. (2024, July 3). “Database: North Korean provocations”. Center for Strategic and International Studies. https://beyondparallel.csis.org/database-north-korean-provocations/.

30. Sheahan, M. & Marsh S. (2022, February 27). “Germany to increase defence spending in response to 'Putin's war' - Scholz”. Reuters. Retrieved July 1, 2024, from https://www.reuters.com/business/aerospace-defense/germany-hike-defense-spending-scholz-says-further-policy-shift-2022-02-27/.

31. Chatterjee, P. (2023, July 11). “How Sweden and Finland went from neutral to Nato”. BBC. Retrieved July 1, 2024, from https://www.bbc.com/news/world-europe-61397478.

32. Zhang, L. & Cao, A. (2023, July 4). “Tech war: China’s move to impose controls on gallium and germanium is a mixed blessing for country’s exporters”. South China Morning Post. Retrieved July 1, 2024, from https://www.scmp.com/tech/tech-war/article/3226548/tech-war-chinas-move-impose-controls-gallium-and-germanium-mixed-blessing-countrys-exporters.
Reuters. (2024, June 21). “China sanctions Lockheed Martin over Taiwan arms sales”. Reuters. Retrieved July 1, 2024, from https://www.reuters.com/business/aerospace-defense/china-sanctions-lockheed-martin-over-taiwan-arms-sales-2024-06-21/.

33. The White House. (2023). “United States Investments in Certain National Security Technologies and Products in Countries of Concern”. The White House. https://www.whitehouse.gov/briefing-room/presidential-actions/2023/08/09/executive-order-on-addressing-united-states-investments-in-certain-national-security-technologies-and-products-in-countries-of-concern/.

34. Smith, J. (2023, September 12). “How Kim Jong Un’s meeting with Putin could shake up North Korea-Russia relations”. Reuters. Retrieved July 1, 2024, from https://www.reuters.com/world/with-putin-summit-north-korea-charts-new-course-fraught-russia-relationship-2023-09-12/.
Faulconbridge, G. & Smith, J. (2024, June 18). “Putin to visit North Korea for first time in 24 years”. Reuters. Retrieved July 1, 2024, from https://www.reuters.com/world/russias-putin-visit-north-korea-june-18-19-2024-06-17/.

35. Jochecová, J. & Lau, S. (2023, October 3). “It’s time Europe reduced its defense reliance on the US, Czech president says”. Politico. Retrieved July 1, 2024 from https://www.politico.eu/article/europe-reduce-defense-reliance-us-nato-czech-president-petr-pavel/
Häsler, G., Eberhart, J & Manz, K. (2024, July 17) “No matter if Trump wins or loses, NATO must learn to defend Europe without the Americans”. NZZ. Retrieved July 17, 2024, from https://www.nzz.ch/english/series-8-under-trump-or-biden-nato-must-end-reliance-on-us-ld.1837223

36. Häsler, G., Eberhart, J & Manz, K. (2024, July 17) “No matter if Trump wins or loses, NATO must learn to defend Europe without the Americans”. NZZ. Retrieved July 17, 2024, from https://www.nzz.ch/english/series-8-under-trump-or-biden-nato-must-end-reliance-on-us-ld.1837223
Associated Press (2024, August 28). “Poland’s government plans record defense spending in its 2025 budget”. AP News. Retrieved August 28, 2024, from https://apnews.com/article/poland-budget-2025-defense-spending-increase-d1b5d840876df2cb850a78348887473a

37. Smith, J. (2022, July 29). “With massive Polish arms deal S.Korea steps closer to Ukraine war”. Reuters. Retrieved July 1, 2024, from https://www.reuters.com/world/with-massive-polish-arms-deal-skorea-steps-closer-ukraine-war-2022-07-28/

38. Altman, H. (2022, July 5). “Big South Korea-Polish Arms Deal Includes FA-50 Fighters, K2 Tanks, K9 Howitzers”. The War Zone. Retrieved July 1, 2024, from https://www.twz.com/big-south-korea-polish-arms-deal-includes-fa-50-fighters-k2-tanks-k9-howitzers

39. Adamowski, J. (2024, February 15). “Poland’s ex-defense chief pushes to max out South Korean arms deals”. Defense News. Retrieved July 1, 2024, from https://www.defensenews.com/global/europe/2024/02/15/polands-ex-defense-chief-pushes-to-max-out-south-korean-arms-deals/

40. Saballa, J. (2024, September 24). “South Korea to Buy Hundreds of Polish ‘Warmate’ Kamikaze Drones”. The Defense Post. Retrieved September 24, 2024, from https://thedefensepost.com/2024/09/24/south-korea-warmate-drones/
Reuters (2024, July 8). “South Korea may buy drones from Poland to expand defence ties, report says”. Reuters. Retrieved July 8, 2024, from https://www.reuters.com/business/aerospace-defense/south-korea-may-buy-drones-poland-expand-arms-relationship-report-says-2024-07-08/

41. Mehta, A. (2024, July 8). “US giving Poland another $2B loan to buy American-made weapons (Exclusive)”. Breaking Defense. Retrieved July 8, 2024, from https://breakingdefense.com/2024/07/us-giving-poland-another-2b-loan-to-buy-american-made-weapons/

42. Radford, A. & Easton, A. (2023, September 22). “Poland no longer supplying weapons to Ukraine amid grain row”. BBC. Retrieved July 1, 2024, from https://www.bbc.com/news/world-europe-66873495.

43. Pierre, A. J. (2014). The global politics of arms sales (Vol. 72). Princeton University Press.

44. Moriyasu, K. (2024, July 12). “NATO, Indo-Pacific partners stand united against China's support for Russia”. Nikkei Asia. Retrieved July 1, 2024, from https://asia.nikkei.com/Politics/International-relations/Indo-Pacific/NATO-Indo-Pacific-partners-stand-united-against-China-s-support-for-Russia.

45. The Government of the Republic of Korea (2022). “Strategy for a Free, Peaceful, and Prosperous Indo-Pacific Region.” The Government of the Republic of Korea. https://www.mofa.go.kr/eng/wpge/m_26382/contents.do.

46. Wezeman, P. D., Djokic, K., George, M., Hussain, Z., & Wezeman, S. T. (2024) “Trends in International Arms Transfers, 2023.” SIPRI. Retrieved July 1, 2024, from https://www.sipri.org/sites/default/files/2024-03/fs_2403_at_2023.pdf.

47. Xinhua. (2019, June 6). “China, Russia agree to upgrade relations for new era”. Xinhua. Retrieved July 1, 2024, from https://english.www.gov.cn/news/top_news/2019/06/06/content_281476701425684.htm.

48. Ng, K. & Ma, Y. (2024, May 17). “How is China supporting Russia after it was sanctioned for Ukraine war?”. BBC. Retrieved July 1, 2024, from https://www.bbc.com/news/60571253.

49. Sher, N. (2024, May 6). “Behind the Scenes: China’s Increasing Role in Russia’s Defense Industry”. Carnegie Endowment for International Peace. Retrieved July 1, 2024, from https://carnegieendowment.org/russia-eurasia/politika/2024/05/behind-the-scenes-chinas-increasing-role-in-russias-defense-industry?lang=en

50. Magnier, M. (2024, May 24). “US, EU and other democracies slam mainland China for military drills around Taiwan, urge ‘restraint’”. South China Morning Post. Retrieved July 1, 2024, from https://www.scmp.com/news/china/military/article/3263871/us-eu-and-other-democracies-slam-mainland-china-military-drills-around-taiwan-urge-restraint.

51. Choi, S. (2024, May 11). “Xi Jinping’s Serbia visit elevates China as ‘natural partner’ for hi-tech, advanced arms sales, analysts say”. South China Morning Post. Retrieved July 1, 2024, from https://www.scmp.com/news/china/military/article/3262221/xi-jinpings-serbia-visit-elevates-china-natural-partner-hi-tech-advanced-arms-sales-analysts-say.

52. Sher, N. (2024, May 6). “Behind the Scenes: China’s Increasing Role in Russia’s Defense Industry”. Carnegie Endowment for International Peace. Retrieved July 1, 2024, from https://carnegieendowment.org/russia-eurasia/politika/2024/05/behind-the-scenes-chinas-increasing-role-in-russias-defense-industry?lang=en

About authors

Seong Hyeon Choi | Research Fellow, CEIAS

choi@ceias.eu

Gary Ng | Research Fellow, CEIAS

ng@ceias.eu

@garyng_econ

Martin Šebeňa | Chief Economist, CEIAS

sebena@ceias.eu

@MartinSebena

Thomas Chan | Research Fellow, CEIAS

chan@ceias.eu

@t_chancovers

About CEIAS

Central European Institute of Asian Studies (CEIAS) is an independent think tank focusing on Europe-Asia relations and developments in the Indo-Pacific region. Originally founded in 2007 in Slovakia, CEIAS is today a transnational think tank with main branches in Bratislava (Slovakia), Prague (Czech Republic), and Vienna (Austria), and further regional presence in Poland, Hungary, Canada, Singapore, Taiwan, Hong Kong, and beyond.

As a sole transnational think tank focused on Asia in Central Europe, CEIAS's main goal is to spread knowledge about contemporary Asia among experts and the public in Central Europe and beyond, while also informing international audiences about Central European, as well as the EU's relations with Asia.

To this end, CEIAS conducts and publishes its own research, organizes seminars and conferences, supports education on Asia and Indo-Pacific-related topics, and provides expert commentary for the local, regional, and international media. CEIAS strives to combine its academic and policy advisory role, producing data-driven, methodologically rigorous, reliable, and practically relevant research that is highly valued by experts and policymakers alike.

CEIAS activities, organized into several workstreams, focus mainly on international relations, politics, security studies, economics, and societies in East, Southeast, South, and Central Asia.

Connect with us online


www.facebook.com/CEIASeu


www.twitter.com/CEIAS_eu


www.instagram.com/ceias_eu


www.linkedin.com/company/ceias-eu


www.ceias.eu


office@ceias.eu

Value-driven economic and military decision-making: South Korea's arms exports to the EU and NATO

Authors: Seong Hyeon Choi, Gary Ng, Martin Šebeňa, Thomas Chan

Proofreading: David Hutt

Design: Thomas Chan, Veronika Blablová, Matej Šimalčík

Cite as: Seong Hyeon Choi, Gary Ng, Martin Šebeňa and Thomas Chan. Value-driven economic and military decision-making: South Korea's arms exports to the EU and NATO. CEIAS, October 2024.

Published by:

Central European Institute of Asian Studies
Murgašova 2, 811 04 Bratislava, Slovakia
www.ceias.eu
office@ceias.eu

ISBN 978-80-8239-025-7

This paper was produced as part of the project *"De-risking and its challenges: Korean Positions in European Electromobility and Military Supply Chains after the Russian invasion of Ukraine"* funded by the Korea Foundation.

www.ceias.eu