



India-Turkey Defense Relations: Prospects and Challenges

Javed Zafar¹

javedzafar@karabuk.edu.tr

Abstract

In the post-Cold War era, the global political order has undergone substantial change. Established alliances have weakened while new alignments have emerged, and India and Turkey have positioned themselves among the world's middle powers. The two countries share a long historical relationship and both hold membership in the G-20. As the post-Cold War order continues to evolve, India and Turkey are each seeking opportunities for closer cooperation. This paper examines the shifting global scenario alongside the strategic requirements of both countries, compares their respective national strengths, and traces the historical background of their defense cooperation. It further reviews the current status of bilateral defense engagement and identifies prospective areas of cooperation together with the challenges that constrain them.

Keywords: *India, Turkey, Defense, Strategy, Cooperation, Global*

INTRODUCTION

The post-Cold War era marked the emergence of the United States as the world's sole superpower, allowing it to shape global politics in accordance with its strategic interests and ideological vision. In recent years, however, the relative decline of U.S. power and the rise of other nations have signaled the advent of a multipolar world order. Key events such as the U.S. withdrawal from Afghanistan, Russia's invasion of Ukraine, and China's expanding global influence underscore this shift. In this evolving geopolitical landscape, regional powers like India and Turkey have emerged as significant players, each asserting influence in its respective region while navigating complex global dynamics.



India and Turkey, though geographically distant, share similarities as emerging economies and influential regional powers. Both are members of the G-20, a forum of the world's largest economies, which reflects their growing economic and political weight. India, the world's fifth-largest economy by nominal GDP, has established itself as a major global player, while Turkey, ranked 17th, holds a strategic position bridging Europe and Asia. When measured by GDP per capita, however, Turkey ranks 54th globally, well above India at 111th, a gap that highlights differences in their economic structures and developmental challenges. Geopolitically, observers often describe India as the gateway to Asia and Southeast Asia, while Turkey serves as a critical link between Europe and Eurasia, earning it the label "gateway of Eurasia."

Despite their regional prominence, India and Turkey face a common challenge: reliance on imported weapons to meet their defense needs. India has historically depended heavily on Russia for military equipment, while Turkey, as a NATO member and EU applicant, has sourced much of its defense hardware from Western nations. Both countries are now diversifying their arms imports and reducing dependence on traditional suppliers. Turkey, for instance, has begun engaging with Russia on defense cooperation despite its longstanding ties with the West, while India has shifted greater attention toward the United States and Europe while maintaining its historical relationship with Russia.

Alongside this diversification, both nations are prioritizing the indigenization of their domestic defense industries to strengthen self-reliance, reduce vulnerability to external supply disruptions, and foster technological innovation. India's "Make in India" initiative and Turkey's efforts to build domestic defense capability exemplify this trend. Both countries are also exploring defense partnerships beyond the traditional Western sphere, seeking collaborations with non-Western nations to expand their military capabilities and geopolitical influence.

This paper addresses three interrelated questions. First, how do India's and Turkey's economic and military profiles compare as a basis for defense cooperation? Second, how has the bilateral defense relationship evolved historically, and what factors have constrained it? Third, in which specific technology domains does the greatest potential for future cooperation lie, and what obstacles stand in the way? The remainder of the paper proceeds as follows: Section 2 sets out the analytical framework used to interpret India's and Turkey's geopolitical



behavior; Section 3 describes the research method; Section 4 presents the comparative results and discussion; and Section 5 concludes. (Bennett, 1980).

ANALYSIS FRAMEWORK

A substantial body of scholarship has examined how geography and relative location shape a country's foreign and defense policy. Beyond physical geography, historical legacies and evolving notions of nationhood play a crucial role in shaping geopolitical strategy, determining alliances, and identifying adversaries.

Historical influence on a nation's geopolitical code operates at two levels. The first is a deep-rooted historical consciousness that stems from ancient civilizations, cultural identities, and long-standing regional interactions. The second consists of recent historical and political processes, including colonial legacies, ideological shifts, and modern state-building efforts, which shape contemporary geopolitical perspectives.

India and Turkey, despite sharing histories of rich civilization and strategic importance, have pursued distinct foreign policy trajectories because of differences in geography, political evolution, and civilizational outlook. These differences have shaped their geopolitical alignments and their respective approaches to global and regional affairs.

The Cold War background remains essential for contemporary geopolitical analysis, particularly for Western nations, because it defined alliances and security structures that persist today. In the post-Cold War world, however, major powers such as Russia, China, India, and Turkey increasingly challenge the Western-led global order. These nations seek to assert themselves as independent poles in a multipolar world, redefining global power dynamics through economic, strategic, and military means.

The establishment and progress of defense relations between nations depend on how each perceives the global order, on mutual strategic interests, and on pragmatic diplomatic approaches. Ideological differences and historical legacies shape foreign policy decisions, but *realpolitik* and national interest often drive defense collaboration in practice. As emerging powers navigate this evolving landscape, their capacity to adapt and forge strategic partnerships will play a decisive role in shaping future global alignments. This framework, combining

geopolitical code theory with a realpolitik reading of defense cooperation, guides the comparative analysis that follows.

RESEARCH METHOD

This study adopts a qualitative descriptive-comparative design. The design suits the research problem because it allows the systematic comparison of two countries' economic and military profiles alongside a historical reconstruction of their bilateral defense relationship, without requiring the manipulation of variables typical of experimental research.

The unit of analysis is the bilateral defense relationship between India and Turkey, examined across five comparative dimensions: economic capacity, military strength, defense budget trends, defense trade (imports and exports), and sector-specific cooperation potential (fighter jet engines, long-range missiles, naval shipbuilding, cybersecurity, and drone technology).

Data for this study come entirely from secondary sources. These include government and ministry publications (such as India's Ministry of Defence and Turkey's Presidency of Strategic Budget and Investment), international economic and security databases (Trading Economics, Macrotrends, Statista), think-tank and policy-research publications (Congressional Research Service, Institute for Defence Studies and Analyses, Insight Turkey, Arms Control Center), specialized defense and economic news outlets (Reuters, Daily Sabah, Middle East Eye, Defense News, Naval News), and prior academic literature on India-Turkey relations.

Data analysis follows a descriptive-comparative procedure in three stages. The first stage compiles indicators for each dimension separately for India and Turkey. The second stage juxtaposes the two profiles to identify convergence and divergence in strategic priorities, capability levels, and trajectories. The third stage interprets these patterns through the analytical framework set out in Section 2, connecting observed indicators to the broader question of cooperation potential and constraint.

This design carries limitations. Reliance on secondary data means the analysis cannot independently verify the figures reported by government agencies, industry sources, or news outlets, and it inherits any reporting bias present in the original sources. The absence of primary

interview or survey data also limits the study's ability to capture the internal deliberations behind specific defense-cooperation decisions. These limitations are consistent with descriptive-comparative designs applied to international relations and are addressed by triangulating figures across multiple independent sources wherever possible.

RESULTS AND DISCUSSION

Economic Comparison

Comparing the economic growth of India and Turkey reveals both parallels and contrasts, as both nations are significant emerging economies with distinct strengths and challenges. India ranks among the fastest-growing large economies in the world, while Turkey has experienced periods of rapid growth punctuated by significant volatility driven by geopolitical and domestic factors.

India is the world's fifth-largest economy by nominal GDP (Forbes India, 2025) and the third-largest by purchasing power parity. Its economy is diversified, with services contributing around 55.71 percent of GDP, followed by industry (27.64 percent) and agriculture (17.66 percent); key sectors include IT services, pharmaceuticals, textiles, and agriculture (Statistics Times, 2024). Turkey, by contrast, ranked as the 11th-largest economy in the world and the fourth-largest in Europe by purchasing-power-parity GDP in 2023 (Economic Outlook, Government of Turkey, 2024). Its economy leans more heavily toward manufacturing, including automotive, textiles, and electronics, while agriculture accounts for a smaller share than in India.

India has sustained one of the fastest average annual GDP growth rates among major economies, around 6-7 percent over the past decade (Congressional Research Service, 2024), and rebounded strongly from the COVID-19 pandemic with growth exceeding 8 percent in 2021-2022 (Cyrill, 2022). The IMF projects continued growth of around 6-7 percent annually in the medium term, driven by domestic consumption, investment, and digital transformation (Economic Times, 2024). Turkey's growth has been more volatile: annual rates often approached 5 percent between 2000 and 2024 (Trading Economics, 2024), but recent years have brought uneven performance due to currency crises, high inflation, and geopolitical tension. Turkey's GDP grew by around 5.6 percent in 2022, accompanied by high inflation and currency depreciation (Turkish Statistical Institute, 2023), and the IMF projects slower growth

of around 3-4 percent in the coming years because of structural challenges (Anadolu Agency, 2025).

India has become a major destination for foreign direct investment, particularly in IT, manufacturing, and renewable energy, supported by reforms aimed at easing the business environment; its trade volume has grown alongside a strong services-export performance, especially in IT (Indian Brand Equity Foundation, 2025). Turkey has historically attracted FDI on the strength of its strategic position bridging Europe and Asia, though recent economic instability and geopolitical tension have dampened investor confidence (Statista, 2025); its trade remains significant, with exports concentrated in manufactured goods such as automobiles and textiles.

India's structural challenges include income inequality, infrastructure gaps, and regulatory hurdles, though its large domestic market, democratic institutions, and ongoing reforms provide a strong foundation for sustained growth. Turkey's economy is more exposed to external shocks because of its reliance on foreign capital and its exposure to geopolitical risk, including tension in the Middle East and strained relations with Western countries; domestic challenges include high debt levels, currency instability, and political uncertainty. India appears positioned to remain among the fastest-growing major economies, driven by its demographic dividend, digital transformation, and infrastructure development, while Turkey's prospects depend on addressing inflation, currency stability, and geopolitical risk even as its strategic location and industrial base offer real potential.

Military Strength Comparison

India maintains one of the largest standing armies in the world, with approximately 1.4 million active personnel and 2.1 million reserve personnel, organized around the Indian Army and supported by the Navy and Air Force (The Sunday Guardian, 2024). Turkey fields a smaller but highly professional force of around 425,000 active personnel and 200,000 reserve personnel, with the Turkish Armed Forces known for strong training programs and NATO interoperability (Armed Forces, 2024).

India's 2023 military spending reached approximately \$72.6 billion (Kumar, 2023), placing it among the top global defense spenders and supporting modernization efforts, border-security requirements against China and Pakistan, and naval expansion in the Indian Ocean. Turkey's 2025 defense budget stands at approximately \$26.8 billion (Soylu, 2024),

considerably smaller than India's, though Turkey prioritizes domestic defense production and modernization to reduce reliance on foreign suppliers, and its defense industry has grown rapidly as an exporter.

The Indian Army, the world's second-largest, fields a mix of domestic and imported weapons, including Arjun and T-90 tanks, artillery, and infantry combat vehicles, with border tension against Pakistan and China driving a focus on mountain warfare and mobility. The Turkish Army emphasizes mechanized and armored units and has developed indigenous battle tanks such as the Altay, drawing on extensive experience in counter-insurgency operations against Kurdish groups.

India's navy ranks among the world's largest, with around 150 ships and submarines including aircraft carriers such as INS Vikramaditya, destroyers, and nuclear-powered submarines, prioritizing maritime security and counterbalancing Chinese influence in the Indian Ocean (Ministry of Defence, India, 2024). The Turkish Navy, though smaller, remains highly capable, with a fleet of about 150 vessels including frigates, corvettes, and submarines, and continues to modernize its forces to support operations in the Eastern Mediterranean and Black Sea (Warpowerturkey, 2024).

India's Air Force ranks fourth-largest globally, with around 1,700 aircraft including Sukhoi Su-30MKI and Rafale fighter jets, and is developing its indigenous Tejas fighter program alongside advanced air-defense systems (Sagar, 2023). Turkey's Air Force operates about 1,000 aircraft, with F-16 fighters forming its backbone, while actively developing the indigenous TF-X fighter and the Bayraktar TB2 drone, which has drawn global recognition for its effectiveness in recent conflicts (Warpowerturkey, 2024).

India is a nuclear-armed state with approximately 164 warheads, following a no-first-use doctrine and maintaining a nuclear triad across land, air, and sea platforms (Arms Control Center, n.d.). Turkey does not possess nuclear weapons but benefits from NATO's nuclear-sharing arrangement, hosting U.S. nuclear warheads at Incirlik Air Base (NTI, 2024).

Both countries emphasize defense-industry development and military modernization. India's "Make in India" initiative seeks to reduce foreign defense dependency through indigenous systems such as the Tejas fighter, the BrahMos missile, and Arihant-class nuclear submarines, though India continues to import a significant share of its equipment from Russia, the United States, and Israel. Turkey has advanced further toward self-reliance, with firms such

as Baykar and ASELSAN producing advanced drones, armored vehicles, and missiles that have strengthened its military capability while reducing dependence on foreign suppliers.

Geopolitically, India's military strategy is shaped by rivalry with Pakistan and China and by ambitions to secure the Indian Ocean, reinforced by its role in the Quad alongside the United States, Japan, and Australia. Turkey's strategy reflects its NATO membership, its involvement in regional conflicts in Syria and Libya, and its aspiration to a dominant role in the Middle East and Eastern Mediterranean, a posture that has at times strained relations with its Western allies.

Defense Budget Trends

Comparing defense budgets from 2000 to 2024 reveals distinct trajectories shaped by each nation's strategic priorities, economic conditions, and security concerns. Both countries have substantially increased military spending, though with different motivations and scales.

India's defense budget rose steadily from approximately \$15.5 billion in the early 2000s to around \$36 billion by 2010, reaching approximately \$72.94 billion in 2020 (Macrotrends, 2024). For fiscal year 2024-2025, India allocated ₹6.8 lakh crore, approximately \$79 billion, to defense, a 9.5 percent increase over the previous year that reflects continued priorities in border security, regional stability, and capability modernization (Economic Times, 2025).

Turkey's defense budget expanded at a different pace, from approximately \$8 billion in 2000 to around \$15 billion by 2010 (Insight Turkey, 2020), reaching about \$20 billion in 2019-2020 (Macrotrends, 2025). By 2024 Turkey's defense and security budget reached around \$40 billion, with a planned 17.5 percent increase for 2025 bringing it to a record \$47 billion (Soylu, 2024), reflecting active military engagement in neighboring regions and continued investment in domestic defense industry.

India's defense budget has grown by a larger absolute margin, consistent with its larger economy and broader strategic interests centered on border security, regional standing, and force modernization. Turkey's growth is linked more directly to regional conflict involvement, security operations, and the expansion of indigenous defense production. India's defense budget represented about 1.9 percent of GDP in 2024, while Turkey's military expenditure accounts for a higher share of its smaller GDP, underscoring a stronger relative prioritization of defense spending.

Defense Import Patterns

India and Turkey show distinct histories of defense imports shaped by their geopolitical contexts, strategic priorities, and domestic defense industries.

Since independence in 1947, India has remained a significant importer of defense equipment. Early imports were minimal and sourced largely from Britain, but India diversified its supplier base over time as regional threats evolved. Between 2013-2017 and 2018-2022, India's arms imports fell by 11 percent, yet the country remained the world's largest arms importer, accounting for 11 percent of the global share in 2018-2022. Russia has traditionally supplied the largest share of India's arms, though this share fell from 64 to 45 percent across the two periods, while France rose to become the second-largest supplier at 29 percent, followed by the United States at 11 percent (Peri, 2023). Despite the "Make in India" push toward self-reliance, India's share of global arms imports actually rose from 4.7 percent in 2014-2018 to 9.8 percent in 2019-2023, indicating continuing challenges in reducing import dependence (Peri, 2024).

Turkey has historically relied on imports from NATO allies to strengthen its military capability, but in recent decades it has made significant strides toward a self-sufficient domestic defense industry, producing indigenous systems such as the Bayraktar TB2 drone and the Altay main battle tank. In 2024, reports indicated that Turkey imposed a comprehensive ban on exporting military and defense items to India, aligning with its support for Pakistan, a decision that illustrates the complex geopolitical dynamics shaping bilateral defense trade.

While both nations have historically depended on defense imports, their trajectories have diverged. India remains a leading arms importer still working to expand domestic production capability, while Turkey has succeeded in expanding its indigenous defense industry, reducing import reliance, and emerging as an arms exporter. Turkey's export ban on India adds a further geopolitical complication to the bilateral defense-trade relationship.

Trade data specific to the bilateral relationship illustrate this asymmetry. Table 1 presents India's imports from Turkey of arms, ammunition, and related parts and accessories.

Table 1. India's Imports from Turkey of Arms, Ammunition, Parts, and Accessories

Category	Value	Year
----------	-------	------

Bombs, grenades, torpedoes, mines, missiles, and similar munitions of war	\$911.11K	2023
Other revolvers and pistols	\$23.70K	2023
Other arms (spring, air or gas guns and pistols, truncheons)	\$1.05K	2023
Parts of military weapons, revolvers, pistols, and muzzle-loading firearms	\$143.19K	2022
Revolvers and pistols	\$2.23K	2012

Source: Trading Economics (2025).

The heavy-munitions category carried by far the largest value (\$911.11K in 2023), indicating that Turkey supplies India with military-grade munitions relevant to training, stockpiling, and operational needs, and that this line dominates the overall bilateral arms-trade relationship. Imports of small arms such as revolvers and pistols remain minimal across the period shown, suggesting India relies on domestic production or alternative suppliers for these categories rather than on Turkey. The \$143.19K in military-weapon parts imported in 2022 indicates that Turkey supplies specialized components not readily available domestically, relevant to the maintenance and upgrading of existing systems. The negligible 2012 value for revolvers and pistols reinforces that small-arms trade between the two countries has historically stayed marginal.

Taken together, these figures describe a growing but narrow defense-trade relationship. Turkey is not a major overall supplier to India compared with Russia, the United States, or Israel, but it fills a specific niche in heavy munitions and weapon components. This pattern is consistent with India's broader strategy of diversifying procurement sources to reduce dependence on traditional suppliers, and it points to room for expansion, particularly in areas such as drone technology where Turkey has made significant advances.

Defense Export Growth

India and Turkey have both achieved notable increases in defense exports in recent years, driven by strategic policy, technological advancement, and government incentives that have expanded domestic production capacity.

India's defense exports were historically limited by stringent export regulations, a domestic-needs focus, and reliance on imports. Reforms under the "Make in India" initiative since 2014 have driven a marked increase: exports stood at approximately \$213 million in fiscal year 2016-17 (Defence Star, 2020), then surged to \$1.5 billion by fiscal year 2018-19, a roughly 700 percent increase in two years driven by policy change, private-sector participation, and expanded manufacturing capability (Panag, 2019). By fiscal year 2023-24, exports reached ₹21,083 crore, approximately \$2.63 billion, a 32.5 percent increase over the previous year (Ministry of Defence, India, 2024), with a portfolio spanning aircraft, naval systems, missile technology, and armored vehicles. Private companies now account for about 60 percent of total exports against 40 percent from defense public-sector undertakings, and India targets \$5 billion in defense exports by 2025 (Bizz Buzz, 2024).

Turkey has pursued an aggressive strategy of reducing dependence on foreign suppliers while building leading domestic firms such as ASELSAN, TAI, and Baykar. Between 2012 and 2022, Turkey reduced defense and aerospace imports while significantly increasing exports, and by 2023 its defense and aerospace exports reached \$5.5 billion, a 25 percent increase over the previous year, before rising further to \$7.1 billion in 2024 (Yaylali, 2025). The Bayraktar TB2 UAV stands out as one of Turkey's most internationally recognized products, and Turkish defense products spanning drones, armored vehicles, and smart munitions now reach 185 countries across 230 product types, including Ukraine, Azerbaijan, Qatar, and several African nations (İstikbal, 2024).

Turkey currently leads in overall export volume, a position attributable to its emphasis on technological innovation, rapid response to market demand, and combat-proven performance of its products. India has nonetheless made significant progress, with export growth driven by policy reform, expanded production capability, and widening global partnerships; continued investment and policy support could allow India to close the gap with Turkey over time.

Historical Trajectory of India-Turkey Defense Cooperation

India and Turkey established diplomatic relations soon after India's independence in 1947. During the Cold War, Turkey's NATO membership and Western alignment contrasted with India's non-aligned stance and close ties to the Soviet Union, an ideological divergence that limited military cooperation. Turkey's consistent support for Pakistan on the Kashmir issue further strained relations and reduced opportunities for defense collaboration. Through this period, Turkey's defense relations centered on NATO while India relied on Soviet military equipment and technology, leaving direct exchanges between the two countries minimal and largely confined to multilateral forums such as the United Nations and the Non-Aligned Movement.

With the end of the Cold War, both countries sought to diversify their diplomatic and economic relations. Defense ties remained underdeveloped, though Turkey expressed interest in India's growing defense industry and limited exchanges took place, including participation in defense exhibitions and discussions on military training and defense production. Bilateral naval visits and multilateral training exercises occurred at low scale during the early 2000s, but political differences over Pakistan continued to constrain deeper cooperation (Hussain, 2011).

From 2000 to 2015, Turkey showed growing interest in India's defense industry, and Turkey's shipbuilding sector held discussions with India on potential naval projects, though no major agreement materialized. Some military training and personnel exchanges took place, and Turkish firms including ASELSAN and Roketsan began participating in Indian defense expositions to explore market opportunities. Turkey's expanding defense partnership with Pakistan, however, raised strategic concerns for India and prevented major defense deals from advancing.

Since 2015, a handful of notable transactions have occurred. In 2017, India signed a deal with Turkish defense-electronics firm ASELSAN to procure more than 1,000 handheld thermal-imaging cameras for the Indian Army, intended for surveillance and counter-insurgency operations along India's borders, marking one of the first substantial defense deals between the two countries. Between 2019 and 2020, Turkey's shipbuilding company STM expressed interest in collaborating with India on naval-platform construction and on India's Project 75I submarine program for advanced diesel-electric submarines, though growing geopolitical tension and Turkey's expanding ties with Pakistan prevented major breakthroughs. In June 2019, a related consortium secured a \$2.3 billion (TL 16 billion) tender to construct five 45,000-ton fleet-support ships, though the contract signing faced delay from political and

financial factors (Manaranche, 2020). In 2017, Turkey exported \$108 million worth of defense products to India (Strategic Front, 2018).

In the aerospace sector, India's Hindustan Aeronautics Limited and Turkish Aerospace Industries held discussions in 2019 on potential collaboration, with TAI expressing interest in partnering on India's Tejas Light Combat Aircraft program and on UAV development. No formal agreement resulted, largely because of India's concern over Turkey's strategic alignment with Pakistan. While direct cooperation has remained limited, these industrial discussions indicate that both countries recognize potential for collaboration should political and strategic conditions improve.

Both countries face a shared structural challenge: historical dependence on Western suppliers for advanced military technology. Turkey's exclusion from the F-35 program following its acquisition of Russia's S-400 missile-defense system, and India's experience of delay and restriction in acquiring critical Western defense technology, illustrate the vulnerability inherent in such dependence. In response, both countries are prioritizing diversified procurement to reduce the risk of politically motivated trade restriction, an effort that has led to closer engagement with non-Western partners and stronger investment in indigenous manufacturing. Exploring avenues for bilateral defense collaboration could further support both countries' goals of self-reliance and technological advancement while fostering a more balanced defense strategy.

Emerging Areas of Cooperation

Fighter Jet Engine Development

Both India and Turkey are developing indigenous fighter jets to strengthen domestic defense capability and reduce reliance on foreign suppliers. Turkey is advancing its KAAN fifth-generation fighter, while India is developing the Tejas Mk2, a more advanced variant of its indigenous light combat aircraft. Turkey's KAAN program currently sits at a more advanced development stage, but both programs face a similar hurdle: dependence on Western-made engines.

All KAAN prototypes currently fly on General Electric's F110 engine, a widely used powerplant in advanced fighter jets (Felstead, 2024), though Turkey has announced plans to equip KAAN with a domestically developed engine, the TF10000, by 2028, marking a significant step toward self-reliance in fighter-jet technology (Daily Sabah, 2024). India's Tejas

Mk2 similarly relies on the American GE F404 engine, with the more advanced GE F414 selected for future variants (IDSA, 2023), a dependence that raises concern over potential geopolitical constraint and supply-chain vulnerability.

Given the strategic risk and financial cost of continued reliance on Western engine suppliers, India and Turkey could explore collaboration in jet-engine development. Both countries have ambitious plans for indigenous engines, yet self-sufficiency in this technology-intensive domain remains a significant challenge for each individually. A joint initiative or technology-sharing agreement could accelerate both programs by pooling resources, expertise, and research capability, and collaboration could extend beyond engines to avionics, stealth technology, and materials science, strengthening both countries' defense industries while deepening strategic cooperation. Despite existing political differences, pragmatic engagement in this domain could help both countries reduce dependence on Western suppliers, enhance strategic autonomy, and strengthen their position in the global defense-aviation market.

Long-Range Missile Technology

India possesses one of the world's few advanced and self-sufficient missile-development programs, with the capability to produce cruise missiles, long-range ballistic missiles, and intercontinental ballistic missiles compatible with nuclear warheads. Its missile families, including Prithvi, Agni, and BrahMos, cover requirements from short-range to strategic deterrence. The Agni-V, India's longest-range ICBM, carries an estimated range exceeding 5,500 kilometers (Financial Express, 2023), and the BrahMos supersonic cruise missile, developed jointly with Russia, ranks among the fastest and most versatile cruise missiles in the world, launchable from land, sea, air, and submarine platforms.

Turkey's missile program remains at an earlier stage, particularly in long-range ballistic capability. The Tayfun, Turkey's longest-range missile to date, reaches a maximum range of 565 kilometers (Daily Sabah, 2023), a significant advance for Turkey but still far short of established missile powers. President Recep Tayyip Erdoğan has stated an ambition to extend Tayfun's range beyond 1,000 kilometers, signaling Turkey's intent to build more capable strategic-deterrent systems (Daily Sabah, 2023), though Western technology restrictions constrain Turkey's path toward this goal.

These constraints have pushed Turkey to seek non-Western partners for missile-technology development, and India, with its established missile programs and history of

defense-technology collaboration, stands out as a well-suited partner. India could share expertise in solid- and liquid-propellant missile systems, guidance and navigation technology, and hypersonic propulsion, while Turkey's growing capability in unmanned aerial vehicles, electronic warfare, and advanced composite materials could contribute to India's own defense projects. Realizing such cooperation would require overcoming political and diplomatic obstacles and ensuring compliance with international missile-control regimes such as the Missile Technology Control Regime, of which India is a member.

Naval Shipbuilding

Turkey is among the few nations with the capability to design, build, maintain, and export naval vessels, having demonstrated expertise over the past two decades in constructing frigates, corvettes, submarines, and amphibious assault vessels. Turkey's simultaneous construction of 31 naval ships illustrates its expanding industrial base and strategic commitment to maritime growth. Its commissioning of the TCG Anadolu, the first drone aircraft carrier of its kind, capable of deploying unmanned combat aerial vehicles such as the Bayraktar TB3, positions Turkey at the forefront of naval-warfare innovation (Daily Sabah, 2023).

Despite geopolitical differences, India and Turkey have explored naval-sector cooperation. In 2019, the two countries signed a \$2.2 billion contract for fleet-support vessels for the Indian Navy, with Turkey's TAIS Shipyards collaborating with Hindustan Shipyard Limited to build five vessels (Daily Sabah, 2019). Political tension and diplomatic difficulty produced significant delay, and the project was ultimately terminated in 2024 (Negi, 2024). Nonetheless, strong potential remains for future naval cooperation given both countries' shared ambitions to strengthen domestic defense industry and expand naval capability.

Should diplomatic obstacles ease, India and Turkey could pursue cooperation across several fronts: joint development of frigates, corvettes, and stealth vessels drawing on both nations' naval-engineering expertise; submarine cooperation, with Turkey contributing its air-independent propulsion experience through the Reis-class submarine to potentially benefit India's Project-75I program; unmanned naval systems, pairing Turkey's leadership in drone carriers with India's growing interest in unmanned underwater vehicles; and a revised fleet-support-vessel arrangement under more favorable terms drawing on Turkey's logistics and replenishment-ship expertise. Realizing this potential will require diplomatic recalibration,

trust-building measures, and well-structured agreements aligned with both countries' long-term strategic interests.

Cybersecurity

Modern warfare extends well beyond conventional battlefields, and cyber capability has become as critical to national security as conventional military platforms. Cyber warfare operates without geographic boundary and around the clock, and the rising frequency of attacks on government institutions, critical infrastructure, and defense systems has compelled nations to invest heavily in cybersecurity, cyber defense, and digital-warfare capability.

India has built world-class expertise in cybersecurity, ethical hacking, and cyber defense, supported by institutions such as the Indian Institutes of Technology, the Indian Institutes of Information Technology, and the Centre for Development of Advanced Computing, and by a thriving industry specializing in threat intelligence, digital forensics, AI-driven cybersecurity, and penetration testing. Turkey has likewise intensified efforts to build indigenous cyber capability to protect its critical infrastructure and defense networks, launching cyber-command units, national security policy, and dedicated R&D programs. Given India's extensive expertise, significant potential exists for collaboration in cybersecurity education, training, cyber-defense research, and joint threat-intelligence sharing.

India could assist Turkey's workforce development through advanced training in ethical hacking, network security, and threat intelligence, while joint cyber exercises and intelligence-sharing agreements could strengthen both countries' ability to detect and neutralize cyber threats, ransomware, and foreign hacking attempts. India's experience securing government networks, banking systems, and military installations could support Turkey's efforts to fortify its national digital-security framework, and reduced reliance on Western technology providers could motivate co-development of indigenous cybersecurity solutions. Joint research in artificial intelligence and big-data analytics could further support real-time threat detection, malware analysis, and predictive cyber-defense strategy, helping both countries identify and mitigate threats before they escalate into large-scale attacks.

Drone Technology

Drone technology has become a defining feature of modern warfare, enhancing intelligence gathering, reconnaissance, surveillance, precision strike, electronic warfare, and logistical support. Unmanned aerial vehicles have become integral to modern armed forces

because they operate without risking human life and cost less than traditional manned aircraft, and their expanding role in both conventional and asymmetric warfare underscores their strategic importance.

Turkey has emerged as a global leader in this field, having designed, developed, and exported a diverse range of combat drones over the past two decades. Turkish systems such as the Bayraktar TB2, Akinci, and Anka-S have seen deployment in conflicts across Syria, Libya, Azerbaijan, and Ukraine, with the TB2 in particular gaining international recognition for its precision, affordability, and reliability. India has likewise made significant progress in UAV development, with indigenous programs including the Rustom series, Tapas-BH, Archer, and the Ghatak stealth drone, alongside research into loitering munitions and swarm-drone technology, though India continues to face challenges in large-scale production, indigenous engine development, and AI-driven autonomous-warfare systems. Turkey's combat-proven UAV experience paired with India's strength in artificial intelligence and software integration points toward a mutually beneficial partnership.

Such a partnership could take several forms. Technology transfer and joint development between Turkish firms such as Baykar and Turkish Aerospace Industries and Indian entities such as Hindustan Aeronautics Limited, Bharat Electronics Limited, and the Defence Research and Development Organisation could combine Turkey's mass-production experience with India's strength in AI-driven automation. Swarm-drone technology and AI integration offer another avenue, with applications in battlefield surveillance, electronic warfare, and autonomous strike missions supported by collaboration in machine learning, computer vision, and target-recognition algorithms. Stealth and high-altitude long-endurance UAVs present a further opportunity: India is developing the Ghatak stealth UCAV while Turkey pursues the MIUS Kizilelma autonomous stealth combat drone, and joint research on stealth technology, composite materials, and radar-evading design could accelerate both programs. As drone warfare grows more prevalent, counter-drone systems, including electronic jamming, directed-energy weapons, and laser-based interception, represent another area where joint development could strengthen protection of critical infrastructure. Finally, a joint India-Turkey drone project could target export markets in Asia, Africa, and the Middle East, combining India's low-cost production strength with Turkey's combat-proven drone experience to compete more effectively against Western UAV manufacturers.

CONCLUSION

India and Turkey are both dynamic emerging economies with distinct growth trajectories. India's large population, stable growth, and reform-oriented policy position it as a global economic power in the making, while Turkey's industrial base and strategic location offer real potential for recovery and growth once it addresses deep-rooted structural issues and geopolitical risk. India's continued focus on innovation, infrastructure, and inclusive growth could further solidify its standing among the world's leading economies in the coming decades.

Both countries maintain significant military capability, though their focus and priorities differ according to their distinct geopolitical contexts. India's larger military size and budget reflect its broader strategic challenges, particularly countering China and securing the Indian Ocean, while Turkey's smaller but highly modernized force emphasizes domestic defense production and regional influence. Both nations continue to invest in modernization and self-reliance, positioning themselves as key players within their respective regions.

The global order is moving toward genuine multipolarity, with Turkey and India emerging as key poles in international politics despite their location in different regions. Balancing this growing multipolarity requires closer cooperation and collaboration between the two countries, and while defense-sector collaboration is already underway, it needs to deepen further to expand their collective influence. Turkey can serve as India's gateway to Eurasia, leveraging its geography and regional influence, while India offers Turkey an entry point into South and Southeast Asia, one of the world's most economically dynamic regions; Turkey's position as a modern, democratic power within the Islamic world can further help India engage more effectively and evenly with Islamic-majority countries.

Bilateral trade between the two countries nonetheless remains modest relative to their shared potential, and its volume needs to grow across a wider range of goods and services. The defense sector has produced some fruitful collaboration, including shipbuilding and small-arms supply, but substantial room remains to deepen partnership in advanced defense technology. Both countries share the challenge of diversifying their defense imports and exports, and considerable potential for cooperation exists in fighter-jet-engine manufacturing, long-range missiles, space exploration, cybersecurity, drone technology, and naval shipbuilding, sectors critical to both countries' pursuit of greater self-reliance and access to cutting-edge technology independent of external suppliers.

The India-Turkey partnership holds real promise. As global power structures continue to evolve, these two countries, with their shared interests and complementary strengths, can

play a central role in shaping the future of global defense, trade, and geopolitics. Expanding cooperation across defense, technology, and trade would strengthen their bilateral relationship while contributing to a more stable and balanced multipolar world.

REFERENCES

- Anadolu Agency. (2025, January 1). IMF projects 3.3% global GDP growth for 2025, 2026: Türkiye's growth projected at 2.6% for this year, 3.2% for next year. <https://www.aa.com.tr/en/economy/imf-projects-33-global-gdp-growth-for-2025-2026/3453945#> <https://www.aa.com.tr/en/economy/imf-projects-33-global-gdp-growth-for-2025-2026/3453945>
- Arms Control Center. (n.d.). India and Pakistan. <https://armscontrolcenter.org/countries/india-and-pakistan/>
- Bizz Buzz. (2024, April 13). Private entities propelling India's defence production to new heights. https://invest.up.gov.in/wp-content/uploads/2024/04/Private-entities_140424.pdf
- Congressional Research Service (CRS). (2024, January 5). India's economy: Overview and issues for Congress. <https://crsreports.congress.gov/product/pdf/IF/IF12564>
- Cyrill, M. (2022). Economic survey for 2021-22 makes case for India's macroeconomic stability despite COVID-19. <https://www.india-briefing.com/news/economic-survey-for-2021-22-makes-case-for-indias-macroeconomic-stability-despite-covid-19-24173.html/>
- Daily Sabah. (2019, June 2). Turkey's TAIS contracted \$2.3b deal to build ships for Indian Navy. <https://www.dailysabah.com/defense/2019/06/01/turkeys-tais-contracted-23b-deal-to-build-ships-for-indian-navy>
- Daily Sabah. (2023, April 10). Türkiye commissions its largest warship, world's 1st drone carrier. <https://www.dailysabah.com/business/defense/turkiye-commissions-its-largest-warship-worlds-1st-drone-carrier>

Daily Sabah. (2023, January 15). Türkiye vows to boost domestic ballistic missile's range to 1,000 km. <https://www.dailysabah.com/business/defense/turkiye-vows-to-boost-domestic-ballistic-missiles-range-to-1000-km>

Daily Sabah. (2024, February 20). Turkish engine maker says fighter jet power unit almost ready. <https://www.dailysabah.com/business/defense/turkish-engine-maker-says-fighter-jet-power-unit-almost-ready>

Economic Outlook. (2024, June). [https://www.trade.gov.tr/data/5b9229ab13b876136466584b/Economic%20Outlook%202024%20\(June\).pdf](https://www.trade.gov.tr/data/5b9229ab13b876136466584b/Economic%20Outlook%202024%20(June).pdf)

Economic Times. (2025, February 1). Defence Budget 2025 disappoints, lacks the firepower India needs. <https://economictimes.indiatimes.com/news/defence/budget-2025-defence-budget-allocation-hiked-to-rs-6-81-lakh-crore/articleshow/117813752.cms?from=mdr>

Economictimes. (2024, October 23). IMF retains India's GDP growth at 7 pc for FY25, says worldwide inflation fight is largely over but warns of new threats. <https://economictimes.indiatimes.com/news/economy/indicators/imf-retains-indias-gdp-growth-at-7-pc-for-fy25-says-worldwide-inflation-fight-is-largely-over-but-warns-of-new-threats/articleshow/114492103.cms?from=mdr>

Felstead, P. (2024). The Turkish Aerospace Kaan future fighter makes its maiden flight. <https://euro-sd.com/2024/02/major-news/36696/kaan-makes-its-maiden-flight/>

Financial Express. (2023, February 28). India's ballistic missile firepower Agni-V: Will it cover China? <https://www.financialexpress.com/business/defence-indias-ballistic-missile-firepower-agni-v-will-it-cover-china-2995206/>

Forbes India. (2025, January 10). Top 10 largest economies in the world. <https://www.forbesindia.com/article/explainers/top-10-largest-economies-in-the-world/86159/1>

Hussain, M. S. (2011). Forging a new partnership: India and Turkey. *Journal of Alternative Perspectives in the Social Sciences*, 3(3), 635--655.

Indian Brand Equity Foundation. (2025). Foreign direct investment. <https://www.ibef.org/economy/foreign-direct-investment>

Insight Turkey. (2020). Turkey's military spending trends: A reflection of changes in defense policy. <https://www.insightturkey.com/articles/turkeys-military-spending-trends-a-reflection-of-changes-in-defense-policy>

Institute for Defence Studies and Analyses (IDSA). (2023). India--US jet engine deal: A major milestone. <https://www.idsa.in/publisher/comments/india-us-jet-engine-deal-a-major-milestone/>

İstikbal, D. (2024). A global brand: Turkish defense industry. <https://www.dailysabah.com/opinion/op-ed/a-global-brand-turkish-defense-industry>

Kumar, M. (2023). India raises defence budget to \$72.6 bln amid tensions with China. <https://www.reuters.com/world/india/india-raises-defence-budget-726-bln-amid-tensions-with-china-2023-02-01/>

Macrotrends. (2024). India military spending/defense budget 1960-2025. <https://www.macrotrends.net/global-metrics/countries/ind/india/military-spending-defense-budget>

Macrotrends. (2025). Turkey military spending/defense budget 1960-2025. <https://www.macrotrends.net/global-metrics/countries/tur/turkey/military-spending-defense-budget>

Manaranche, M. (2020). Indian MoD signed a contract with Turkey's TAIS shipyards for 5 fleet support vessels. <https://www.navalnews.com/naval-news/2020/05/indian-mod-signed-a-contract-with-turkeys-tais-shipyards-for-5-fleet-support-vessels/>

Ministry of Defence, India. (2024). FAQs: Current force levels and ongoing projects in the Indian Navy. <https://www.mod.gov.in/faqs/q-1-what-are-current-force-levels-indian-navy-what-are-ongoing-projects-what-steps-are-being>

Ministry of Defence, India. (2024). <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2016818>

- Negi, M. (2024). Hindustan Shipyard terminates contract with Turkish firms in Navy's project. <https://www.indiatoday.in/india/story/hindustan-shipyard-limited-terminates-turkish-firms-contract-navy-fleet-support-ship-2526185-2024-04-11>
- NTI. (2024). Nuclear disarmament Turkey. <https://www.nti.org/analysis/articles/turkey-nuclear-disarmament/>
- Panag, H. S. (2019, November 19). Modi govt made defence exports jump 700%. Now it must radically reform ordnance factories. <https://theprint.in/opinion/modi-govt-made-defence-exports-jump-700-now-it-must-radically-reform-ordnance-factories/383476/>
- Peri, D. (2023). India remains biggest arms importer between 2018-22 despite drop in overall imports. <https://www.thehindu.com/news/national/india-remains-biggest-arms-importer-between-2018-22-despite-drop-in-overall-imports/article66614120.ece>
- Peri, D. (2024). India world's top arms importer between 2019-23: SIPRI. <https://www.thehindu.com/news/national/india-worlds-top-arms-importer-between-2019-23-sipri/article67943114.ece>
- Soylu, R. (2024). Turkey defence and security budget surges to record \$47bn. <https://www.middleeasteye.net/news/turkey-defence-security-budget-highest-47bn>
- Statista. (2025). Value of foreign direct investment (FDI) inward flows in Turkey from 2011 to 2023. <https://www.statista.com/statistics/935239/value-of-foreign-direct-investment-inward-flows-in-turkey/>
- Statistics Times. (2024, October 2). India GDP sector-wise. <https://statisticstimes.com/economy/country/india-gdp-sectorwise.php>
- Strategic Front. (2018). Turkish defense exports to India. <https://www.strategicfront.org/forums/threads/turkish-defense-exports-to-india.742/>
- The Sunday Guardian. (2024, August 4). The Indian armed forces in 2024. <https://sundayguardianlive.com/investigation/the-indian-armed-forces-in-2024>
- Trading Economics. (2024). Turkey GDP growth annual. <https://tradingeconomics.com/turkey/gdp-growth->

