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Arms at the Frontier

What Turkey's Africa Engagement Reveals about Its Defence-Industrial Model

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Turkey's defence engagement in Africa is often read through the lens of geopolitics, drone use, and conflict dynamics. Yet the deeper story is industrial and strategic. Africa remains central to Turkey's defence-export strategy because it helps resolve structural pressures within Turkey's defence-industrial ecosystem by sustaining production, easing competitive pressures, and creating external demand for an increasingly export-dependent industry. As Turkish and European companies become more closely connected, these dynamics will increasingly matter for Germany and the European Union (EU) both within Europe's defence-industrial landscape and in third markets beyond its direct reach.

Since the early 2000s, Turkey's defence industry has made significant progress. The number of projects, firms, and specialised suppliers has expanded rapidly, domestic systems have entered the Turkish Armed Forces' (TAF) inventory, and defence-and-aviation exports have reached successive records. Yet this growth has also produced structural tensions within the fast-growing industry.

Turkey's defence-industrial development has, however, never been a purely commercial process. Its primary objective has been to secure the TAF's supply chains through domestic production and to reduce dependency on external providers. Despite their divergent domestic and foreign-policy orientations, different governments have pursued this policy since the first major punitive US sanctions in modern Turkish history, imposed in response to Turkey's 1974 military operation in Cyprus, which resulted in the island's de facto partition. The industry continued to grow in the 1980s and 1990s, partly through joint ventures with Western companies. Turkey nevertheless remained predominantly an arms importer. Aspirations to have a homegrown defence industry less dependent on Turkey's Western allies bore fruit under the Justice and Development Party (AKP) rule. Economic growth, higher public spending, and more centralised decision-making enabled a rapid expansion of domestic defence projects, while government preferences also encouraged the rise of politically connected firms.

The result has been a far more capable and diversified defence-industrial ecosystem. The number of defence companies, subcontractors, suppliers, and specialised personnel has increased dramatically. The number

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of defence companies grew from 56 in 2002 to around 1,500 by 2020. By 2026, the sector included nearly 4,500 small and medium-sized enterprises (SMEs). Defence-industrial projects expanded from 62 in 2002 to 269 in 2010, 667 in 2018, and more than 1,000 by 2024. According to the Presidency of Defence Industries (SSB) — the government agency responsible for defence procurement and industrial development — the total project volume, including those still in the tendering phase, reached around $90 billion, a sixteenfold increase over two decades.

Sustaining the industry: From domestic procurement to export dependence

This sectoral expansion has changed the sector's underlying political economy, creating new constraints. Whereas import substitution initially aimed to satisfy domestic military requirements, the growing number of projects and producers eventually exceeded the absorptive capacity of domestic procurement. The transformation from import-substitution to export-driven industrialisation has meant that Turkey's defence-industrial model has become increasingly dependent on foreign markets to sustain production lines, amortise R&D costs, generate foreign currency, and justify continued public investment.

Exports are no longer simply a marker of commercial success. Instead, they have become a condition for the sector's financial and political sustainability. In 2025, exports accounted for 97 per cent of military vehicle producer Otokar's defence industry revenue, while foreign sales generated 90 per cent of drone manufacturer Baykar's 2024 revenue. Such figures illustrate business models that cannot be sustained by domestic procurement alone.

Uneven pressures within a crowded and rapidly scaling ecosystem

The pressure to export in order to sustain this rapidly growing defence-industrial ecosystem does not stem from uniform conditions. Different segments of the industry face distinct constraints but increasingly depend on access to external markets.

Crowding and overcapacity

The armoured-vehicle sector most clearly demonstrates how industrial expansion generates pressure for foreign sales. Over the past two decades, Turkey has developed a dense cluster of producers, including Otokar, BMC, FNSS, Nurol Makina, and Katmerciler, while the SSB's Product Catalogue lists around 30 companies active in this segment. This diversity has encouraged innovation, product differentiation, and export dynamism, but it has also produced duplication and intense rivalry within a limited domestic procurement market.

Although there were recurring expectations in the 2010s that the sector's five dominant firms would eventually be consolidated under a single corporate structure with the encouragement of the SSB, no such restructuring followed. Instead, the SSB's next-generation armoured-vehicle programmes continued to pit major domestic producers against one another, while lengthy prototype, testing, and procurement processes pushed firms to look beyond the TAF as their primary customer.

Hence, duplicated platform development and repeated head-to-head competition have made exports a strategic necessity for firms in crowded segments and further strengthened the structural push outwards. FNSS, Nurol Makina, and other producers have followed similar export-oriented paths across African, Asian, Middle Eastern, and European markets. By the late 1990s, FMC-Nurol (later FNSS) and Otokar were already selling armoured combat vehicles and personnel carriers to Middle Eastern markets, including the United Arab Emirates, Kuwait,

Bahrain, and Egypt. Under the AKP rule, this trend has acquired a new logic, driven by the need to secure production continuity. More recent examples include Otokar's COBRA II deal with Romania in 2024 and the acquisition of a Romanian manufacturing facility in 2026.

Vertical integration, rapid scaling, and SME internationalisation

A different outward push is observable in high-technology segments. In areas such as electronics, smart munitions, unmanned systems, sensors, and subsystems, large prime contractors are increasingly developing or integrating capabilities that overlap with those of specialised suppliers. For instance, ASELSAN, Roketsan, and Turkish Aerospace (TAI) have expanded vertically into components and systems previously outsourced to smaller firms. By internalising strategically important components, these firms can reduce reliance on foreign suppliers and strengthen in-house control over intellectual property, costs, and delivery schedules for several critical technologies. For domestic SMEs, however, vertical integration eliminates subcontracting opportunities, weakens their bargaining power, and pushes them towards independent export channels.

One consequence is the proliferation of collective export strategies among smaller firms. With the SSB's active support, defence-industrial clusters such as the OSTIM Defense and Aviation Cluster (OSSA) and Teknokent Defense Industry Cluster help SMEs pool resources, benefit from state-backed internationalisation incentives, participate in overseas trade fairs, and present themselves abroad as part of a wider Turkish defence-industrial ecosystem. In practice, these networks allow smaller companies to reduce their dependence on dominant domestic prime contractors by pursuing niche opportunities in foreign markets. By 2023, SMEs accounted for almost a quarter of Turkey's defence exports.

Large technology firms face a different constraint. Demand is increasingly testing their ability to scale production and serve several markets simultaneously. Turkey's defence exports rose to $7.154 billion in 2024 and $10.05 billion in 2025, while the value of newly signed contracts increased from $10 billion to $17.8 billion over the same period. Baykar illustrates this bottleneck most starkly. The company has carried a multi-year order backlog since 2022, with export contracts for the Bayraktar TB2 unmanned combat aerial vehicle alone covering 36 countries. Even after roughly doubling output and investing simultaneously in in-house engine development and overseas production, its production capacity has remained under pressure as demand has continued to grow. TAI shows similar strains on the aviation side. Although it is rapidly expanding its production capacity, it must also meet export commitments. Air-defence firms face a parallel squeeze. ASELSAN's international orders doubled over the past year. In response, the company announced a $1.5 billion technology base intended to more than double production. These investments point to a sector under pressure to serve several demanding markets at once. Turkey's growing involvement in European defence-industrial cooperation and rearmament, NATO capability-development efforts, rising Gulf procurement, and continued demand from African markets is placing additional pressure on Turkish production lines, skilled labour, critical components, engines, munitions, and maintenance capacity.

Africa as a showcase of uneven sectoral pressures

Turkish engagement in Africa provides a particularly useful lens through which to examine the changing political economy of the defence industry and the various challenges firms face as their dependence on external demand increases.

Africa accounts for a relatively small share of the rapidly growing global arms market. Military expenditure in Africa totalled a modest $52.1 billion in 2024, a 3.0 per cent increase from 2023 and 11 per cent higher

than in 2015. Yet the significance of African markets lies less in their aggregate size than in the different opportunities they offer to individual segments of Turkey's defence industry. Established land-systems manufacturers use African markets to help sustain their production lines. Large aerospace and defence electronics firms use them to support their rapid international expansion. Smaller suppliers, meanwhile, can access niche markets and reduce their dependence on domestic prime contractors. These complementary drivers have underpinned Turkey's growing presence across the continent. SIPRI data confirm this trend: Turkey increased its share of arms transfers to sub-Saharan Africa from 6.3 per cent in 2019—2023 to 11 per cent in 2021—2025, overtaking France to become the region's third-largest arms supplier after China and Russia.

Surviving in crowded land-systems markets

The armoured-vehicle segment clearly demonstrates the relationship between domestic crowding and African expansion. By the number of recipient countries, armoured and tactical land vehicles constitute Turkey's most geographically widespread defence segment in Africa, with all leading domestic manufacturers exporting across the continent. These companies operate in a crowded domestic market characterised by overlapping platforms. African demand therefore provides an additional outlet for production capacity that cannot be absorbed by Turkish military procurement alone. Over the past decade, Otokar has become the top-selling company in its segment to African countries. Currently, Otokar's armoured military vehicles, most notably the popular COBRA model, are in service in at least 14 African countries and in United Nations and African Union peacebuilding and peacekeeping missions across the continent. Nurol Makina's vehicles have been deployed extensively across the Sahel and East Africa, becoming standard equipment for counter-insurgency operations in Somalia and Burkina Faso.

This dynamic is especially critical for mid-sized exporters. For example, in 2021 Katmerciler signed a contract with Kenya for 118 Hızır vehicles for approximately $91.4 million. It was the company's largest export order at the time. The firm also delivered 185 Hızır MRAPs, with an estimated value of $75 million to the Democratic Republic of Congo in 2024. These contracts carry far greater operational and financial significance for Katmerciler than a similarly valued order would for aerospace giants such as Baykar or TAI. For these mid-sized defence companies, these exports extend beyond the initial sale and sustain production continuity, strengthen firms' export credentials, and generate long-term aftermarket revenues.

Moreover, because wheeled tactical vehicles are less expensive and easier to operate than heavy tracked platforms, their modular design allows manufacturers to tailor weapon stations, communications suites, and armour packages to individual customer requirements. This adaptability not only enhances their export appeal but also fosters enduring service relationships through maintenance, upgrades, and technical support.

Sustaining production and the expansion of large technology firms

Meanwhile, unmanned systems and precision munitions represent the most politically visible segment of Turkey's defence industry in Africa. African customers operate within a wider Turkish ecosystem rather than relying on isolated platforms. This includes Baykar's TB2 and Akıncı, TAI's ANKA, and Roketsan's MAM-series precision-guided munitions. These systems are accompanied by ground-control stations, communications equipment, electro-optics, as well as training and maintenance packages. Approximately 18 African states have been reported as recipients, with the most established operators including Burkina Faso, Chad, Ethiopia, Libya, Mali, Morocco, Niger, Nigeria, Somalia, Sudan, Togo, and Tunisia.

Although this segment disproportionately benefits the large companies such as Baykar, TAI, and Roketsan, each airframe sale pulls in a much wider domestic supply network. This includes electro-optics, datalinks, warheads, support vehicles, generators, spares, and software. Its industrial value therefore far exceeds the airframe contract alone. Consequently, this ecosystem also extends to ASELSAN and HAVELSAN. ASELSAN's equipment is currently in service across 21 African countries, with key areas of operation including border security, air defence, airborne platform payloads, and jamming systems. In other words, these companies enter African markets both directly and through integration into other Turkish platforms. Their products include electro-optical sensors, radios and tactical communications, remote-controlled weapon stations, command-and-control systems, radar and surveillance equipment, electronic-warfare suites, naval combat-management systems, and simulation and training tools. Direct export statistics significantly understate this broader footprint. In 2024, for instance, ASELSAN reported $217 million in direct exports and a further $291 million in indirect exports through other companies' final systems.

For large technology companies, the African market is valuable because it contributes to market diversification. Both private and state-owned unmanned aerial vehicle (UAV) producers have incentives to avoid excessive dependence on European, Gulf, or NATO demand. Those markets may offer larger contracts, but they are also more politically and technologically demanding. European procurement cycles, for example, are comparatively lengthy and often require substantial industrial adaptation. Many African governments, by contrast, have immediate operational requirements and are willing to acquire existing systems.

More importantly, Turkey accounted for 65 per cent of armed drone sales by Turkey, China, and the United States between 2018 and 2023, driven heavily by Baykar's flagship Bayraktar TB2, alongside TAI's Aksungur and Anka-S. For Baykar and TAI, European markets also present a technologically demanding and crowded environment, with established producers and politically protected supply chains. African markets offer a different opportunity. Firms can sell established systems through comparatively short procurement cycles while building integrated ecosystems around platforms, munitions, electronics, training, and maintenance. African demand may not receive equal priority across all product categories as European and Gulf orders grow, but it retains a distinct industrial function. Turkish firms have become leading UAV suppliers, shaping their customers' air-defence architectures. Turkish UAV exports to Africa rose from near zero in 2019 to 111 units in 2022.

Creating export channels for smaller suppliers

Africa performs a third function for smaller suppliers seeking to reduce dependence on domestic prime contractors. African demand extends well beyond complete weapons platforms to include small arms, ammunition, communications equipment, vehicle components, drone subsystems, software, and maintenance services.

At the opposite end of the visibility spectrum from high-profile fighter aircraft or armoured vehicles, small arms, ammunition, and explosives constitute one of the most geographically widespread yet least transparent segments of Turkish defence exports. Key suppliers include state-owned MKE and private firms such as Sarsılmaz, Samsun Yurt Savunma (Canik), TİSAŞ, Arca Defence, and a growing number of other firearms and ammunition manufacturers. These companies produce ammunition, rifles, machine guns, artillery rounds, and explosives. Mostly located in Central Anatolia, these firms export directly to the armed forces of numerous African countries, across West Africa, and particularly in Mali. Similarly, smaller firms producing drone components and related software are following a similar trajectory. Their growing exports of systems, subsystems, and

components show how African markets provide an internationalisation channel for smaller Turkish defence manufacturers.

The African market therefore addresses different needs across Turkey's defence-industrial ecosystem. It helps land-systems manufacturers sustain production despite domestic market crowding, supports large technology companies' expansion of integrated product ecosystems, and gives smaller suppliers opportunities to establish export channels beyond domestic prime contractors. Rather than simply as a growing arms market, it is in this differentiated sense that Africa reveals a central asymmetry in the political economy of Turkey's export-dependent defence industry.

Ankara's strategic orientation towards the continent has certainly facilitated the pivot. The Turkish government has reinforced defence firms' outward push through the SSB's export-oriented strategic plans, its defence attaché networks, international fairs, cooperation meetings, and Defence Industry Cooperation Agreements. With more than 25 such agreements signed with African countries, Ankara has helped transform Africa from an opportunistic export destination into a more stable arena for Turkey's defence industry.

This state-supported model is highly centralised at the strategic level. Since 2017—2018, with the transition into the presidential system, the SSB has been attached directly to the presidency, while the Defence Industry Executive Committee brings together the vice president, key ministers, the chief of the general staff, and the SSB president. This configuration shows that defence exports are not governed as a normal private market. They sit within a presidentially steered strategic field linking procurement, industrial policy, fiscal authority, and national security.

Export authorisation is nevertheless more dispersed than a simple account in which "the SSB controls everything" would suggest. Under the 2007 regulation implementing the war materials law, applications are submitted to the Ministry of National Defence's national security authority, require end-user certification, and involve consultations with the General Staff and the Ministry of Foreign Affairs. The SSB may coordinate strategy and promotion, but formal licensing remains centred on the Ministry of National Defence, with the Ministry of Foreign Affairs also holding a formal role.

This institutional overlap helps explain why African defence exports are often bundled with training agreements, ministerial visits, and wider bilateral packages. For complex systems such as UAVs, naval assets, electronics, and guided munitions, the line between export, training, maintenance, and foreign policy becomes increasingly thin. Turkish firms therefore operate less in a liberal export market than in a politicised export ecosystem.

Limitations: Institutional dynamics and export governance

This export ecosystem has formal safeguards but also evident governance gaps. The SSB's 2024—2028 Strategic Plan acknowledges the absence of a widely adopted sectoral export strategy, the lack of a shared export information management system, and the need for stronger incentives and credit mechanisms. This admission is important because it suggests that Turkey's defence exports have expanded faster than the institutional framework intended to coordinate, finance and regulate them.

The most important gap concerns end-use control. Ex ante licensing and end-user certificates are necessary but insufficient in conflict-affected and politically fragmented environments. Once systems are delivered, transferred, maintained, or embedded in third-party security partnerships, Ankara's ability to control their operational use becomes more limited. This comes with reputational and political risks. This is especially problematic in African theatres, where regional patrons, rival armed actors, and weak state institutions complicate accountability. Sudan is the most sensitive case, but it is not the only one. In 2021, the United States expressed "profound humanitarian

concerns" over Turkish TB2 drone sales to Ethiopia. Such cases are unlikely to halt exports as long as demand remains high and export dependence persists. Yet they raise the external costs of opaque transfers to unstable theatres, especially as Ankara seeks deeper defence-industrial cooperation with Europe, NATO allies, and the United States. Africa's security value may therefore pull one way, while Turkey's ambitions in European and US markets pull in another direction.

Under these conditions, Turkey appears more likely to adapt to, rather than withdraw from, politically and economically risky markets. The SSB's strategic planning already points in this direction through stronger export coordination, improved financing tools, and more formal state-to-state sales mechanisms. In this model, Ankara acts not only as a promoter but also as a facilitator, coordinator, and, where necessary, political guarantor.

One important adaptive trend already evident among Turkish firms is the externalisation of production, maintenance, and political risk through overseas production and local partnerships. ASELSAN's subsidiary in South Africa and its office in Nigeria, Baykar's technology-transfer and joint-production arrangements, its Atlas Defence subsidiary in Morocco, and emerging Turkish—Egyptian co-production initiatives all point to this trend. These moves align with changing African expectations that defence cooperation should support not only military acquisition but also industrial development, technological upgrading, local capacity-building, and strategic partnership formation.

Turkey is unlikely to sustain its Africa defence strategy through the export of complete systems alone. This approach may help Ankara manage production-capacity restraints and retain influence in Africa, but it will not resolve the deeper dilemmas of export governance. As Turkish systems become more embedded in fragile markets, Ankara will face growing pressure to decide not only where it can sell, but also where it should sell, under what conditions, and with what mechanisms of accountability.

Implications for the EU and Germany

Turkey is neither simply an external competitor nor merely an additional source of industrial capacity. It is an autonomous defence-industrial actor whose firms are becoming partially integrated into the EU's emerging defence-industrial landscape while retaining a distinct model of state-supported market access. For Germany and the EU, understanding Turkey's political economy of defence production is therefore relevant to European competitiveness, supply-chain policy, export governance, and economic-security engagement in the Global South.

Turkey's industrial capacity constraints and external expansion pressures align with the EU's search for greater defence-industrial capacity and industrial integration with partners. These capacity constraints are already prompting Turkish firms to expand production, maintenance, and assembly facilities abroad. Furthermore, their continued dependence on foreign technologies, components, and certification provides an additional incentive to enter European partnerships. In fact, Turkish and European companies compete in some product segments while pursuing cooperation in others, including unmanned systems, naval platforms, electronics, sensors, and armoured vehicles.

Competition for skilled labour and the need to serve several demanding markets simultaneously may further increase Turkish interest in joint production, participation in multinational arms programmes, and access to European funding mechanisms. European companies — particularly those in Italy, Spain, and the United Kingdom — also view cooperation with Turkish firms favourably as a means of reaching third markets where Turkey has already established commercial and political networks.

These expanding industrial links will also make European—Turkish cooperation increasingly difficult to disentangle from Turkey's activities in third markets. Joint ventures, European components incorporated into Turkish platforms and cooperation on third-market sales can potentially connect European industry to production, maintenance, and localisation networks extending into African markets. For European policymakers, one challenge is to ensure responsible arms transfers and export regulations as these industrial ties expand.

Germany and the EU should also develop a third-market assessment framework for their expanding defence-industrial relations with Turkey. This framework should integrate cooperation and export governance and examine how European components, technologies, joint ventures, and financing interact with Turkey's state-supported export model across the full lifecycle of a defence relationship, from production and initial sale to local assembly, maintenance, upgrades, and possible re-export. Furthermore, this framework should identify supply-chain exposure, anticipate conflict-related and political risks and clarify responsibilities before European—Turkish projects extend into third markets.

At a more strategic level, the EU and Germany should address the deeper challenge of how to respond to a model of defence-industrial internationalisation in which African markets become spaces for production networks, maintenance ecosystems, and long-term industrial positioning. The EU will need a framework that combines selective cooperation with Turkey, a more competitive proposition for African partners, and stronger safeguards for accountability in fragile security environments. In practice, this could involve: a) prioritising European—Turkish cooperation in complementary industrial segments and, where appropriate, extending such cooperation to African-led production and maintenance partnerships; and b) supporting these partnerships only where supply-chain security, technological reciprocity, and compatible export practices are assured.

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