

RESEARCH NOTE

New trends in Western support for Turkish arms industry



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Companies are finding new avenues to profit from the Turkish military-industrial complex, despite trends toward self-sufficiency in the Turkish arms market driven by Erdoğan's nationalist intentions

At least 6 of the top 10 and 40% of the world's top twenty-five arms companies have established joint venture projects, daughter companies and knowledge-sharing agreements with the Turkish state in recent years

Rheinmetall: expert advice and engines of next-generation tanks being supplied by German companies despite state moratorium on tank upgrades during Afrin operation

Extracting profits from Erdoğan's nationalist project

INTRODUCTION

Companies in NATO countries are finding ways to continue and expand lucrative relations with the Turkish state, despite their worsening human rights record and reputation on the world stage, while Turkey is also seeking out new partners for arms projects among weaker NATO states such as Italy and post-Brexit Britain.

By setting up joint venture projects and third-party companies in Turkey and selling their knowledge, consultancy and expertise rather than hardware itself, European companies are able to:

- circumnavigate laws intended to limit their dealings with the Turkish state
- extract profits from the Erdoğan government's military-nationalist project (see below)
- cement lucrative, long-lasting relationships with the Turkish state and its military-industrial complex despite trends toward self-sufficiency in the Turkish arms market

Accordingly, at least 6 of the top 10 and 40% of the world's top twenty-five arms companies have established joint venture projects, daughter companies or knowledge-sharing agreements with the Turkish state in recent years¹.

Lockheed Martin, BAE Systems and Northrop Grumman are among the world's largest arms companies, all of whom have established joint-venture projects in Turkey in recent years. Joint-venture projects around Lockheed Martin's F-35 fighter jet programme will create some \$12 billion in revenue for Turkish companies, for example².

This report looks in turn at how these and other major global arms companies are making increasing use of joint venture projects, the sale of training and expertise and third-party companies in their dealings with the Turkish state.

1 All figures taken from Stockholm Institute for Peace 2017 rankings, published December 2018, unless otherwise stated:

https://www.sipri.org/sites/default/files/2018-12/fs_arms_industry_2017_0.pdf

2 <https://www.f35.com/global/participation/turkey-industrial-participation>

Erdoğan: centralising & expanding the Turkish arms market

Of course, it is important to note that these companies are still involved in conventional arms sales and manufacturing deals, worth billions of dollars. These ongoing deals have been well-documented elsewhere.

But reducing dependency on imported weapons has become an increasing priority of the Turkish government, in line with the AKP party's nationalist agenda and President Recep Tayyip Erdoğan's strongman image. Following the imposition of the state of emergency, in 2017 Erdoğan put the Turkish arms industry directly under his control.

Per the state of emergency decree No. 696, the Turkish Armed Forces Foundation (TSKGV), which owns majority shares in Turkey's top defense companies, reports to the president and not as before to the defense minister¹. The Turkish state's largest defense company Turkish Aerospace Industries (TAI), military electronics specialist Aselsan, missile-maker Roketsan, and military software specialist Havelsan now report directly to Erdoğan.

The Turkish state's domestic weapons market is anticipated to be worth some \$6.7 billion by 2027, including a projected \$3.4 billion ground-launched weapons market. The ground-to-ground precision-guided weapons market is estimated to increase over 500% in the same time period, from about \$99 million in 2018 to \$530 million².

Researchers at the Stockholm International Peace Research Institute have identified "Turkey's ambitions to develop its arms industry to fulfil its growing demand for weapons and become less dependent on foreign suppliers."³

Moreover, the Afrin operation was a reminder to Ankara of the vulnerability of dependency on foreign markets. Most notably, Germany blocked a key upgrade of Turkish-owned, German-made Leopard tanks because of their use in the Afrin operation⁴. In a February 2018 meeting at his presidential palace, Erdoğan said: "Almost all of the armoured carriers (operating) in Afrin are domestically produced. I thank our friends who produced them."⁵

As such, the trends identified in this report provide a picture of what the future holds for the lucrative Western arms trade with the Turkish state, as Western companies participate in and facilitate this arms boom.

1 <https://www.defensenews.com/industry/2017/12/27/turkeys-erdogan-decrees-sweeping-defense-procurement-takeover/>

2 <http://www.nationaldefensemagazine.org/articles/2018/6/12/opportunities-abound-in-turkish-weapons-market-over-next-decade>

3 <http://www.hurriyetdailynews.com/turkish-companies-arms-sales-rose-24-percent-last-year-139613>

4 <https://www.globalsecurity.org/military/world/europe/tu-industry.htm>

5 <http://www.hurriyetdailynews.com/turkey-aims-to-produce-unmanned-tanks-erdogan-127712>

Rheinmetall: exploiting loophole to profit from Turkish Altay battle tank

CASE STUDY

World ranking: #25

Arms sales in 2017:
\$3.4 billion

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The Turkish state is currently developing an indigenous next-generation battle tank. The Altay Tank will be serial produced by BMC, a privately owned Turkish-Qatari armored vehicles manufacturer, in a multibillion dollar contract. The \$500million prototype contract went to Otokar.¹

Rheinmetall is Germany's largest arms company, and rank in the top 25 arms companies globally by annual turnover. In October 2016, Rheinmetall founded the joint venture Rheinmetall BMC Defense Industry (RBSS) in Turkey, together with BMC and Malaysian partners². BMC is owned by Erdoğan's ally Sancak Adamu, who also owns a number of Turkish newspapers, while the Malaysian partners also fund the "Turken Foundation", an Islamic institution which Erdoğan's son, daughter and other family members are involved in and which is suspected as serving as a vehicle for Erdoğan's political intentions³.

In internal papers published in 2015, Rheinmetall talked about developing joint venture battle tanks for the Turkish state, citing the project at around US\$7billion.

In 2017, Rheinmetall expressed dismay that tensions between the Turkish state and Germany over human rights concerns would hold up its planned involvement in the tank project⁴. By law, arms exports from Germany have to be approved by the government, and in October 2017 the project was frozen.

But **by using their joint venture company in Turkey and charging for technical support and expertise ("consultancy"), Rheinmetall is still playing a critical role in the Altay project**⁵. Arms restrictions do not extend to training and expertise, meaning they are able to avoid the need for government approval while still forming an indispensable part of the project.

Moreover, the Altay's prototype is set to be **powered by a 1,500 hp diesel engine from Germany's MTU Friedrichshafen GmbH**. A spokesperson said that the Germans have not objected to providing the engine for the tank, despite the freeze on updating the Turkish state's old tank fleet imposed during the Afrin invasion.⁶

1 <https://www.defensenews.com/land/2018/04/25/turkey-awards-multibillion-dollar-contract-for-indigenous-altay-tank/>

2 https://www.armyrecognition.com/august_2016_global_defense_security_news_industry/bmc_rheinmetall_and_etika_strategi_form_a_joint_venture_for_armored_vehicles_development_50508161.html

3 <http://weaponews.com/analytics/22516-rheinmetall-the-hidden-side-of-the-transaction-to-establish-a-joint-ge.html>

4 <https://www.dailysabah.com/diplomacy/2017/10/31/german-arms-firm-tension-with-turkey-may-hold-up-defense-projects>

5 <https://www.dailysabah.com/defense/2018/11/09/turkey-signs-mass-production-deal-with-bmc-for-altay-tanks>

6 <http://www.defense-aerospace.com/articles-view/release/3/197460/turkey%E2%80%99s-bmc-wins-altay-tank-production-contract.html>

LOCKHEED MARTIN: \$12BILLION OPPORTUNITIES FOR TURKISH COMPANIES TIED TO F-35 FIGHTER JET

World ranking: #1

Arms sales in 2017:
\$44.9 billion

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With a 2017 revenue of \$51 billion, 88% of which is derived from arms sales, Lockheed Martin was the world's largest arms producer in 2017.

The development of the flagship F-35 fighter jet has created industrial opportunities for Turkish companies, which are expected to reach \$12 billion. Central beneficiaries are TAI, Roketsan and Aselsan, with whom Lockheed Martin has established joint venture projects.¹

Aselsan is developing manufacturing approaches for advanced optical components, which are part of the F-35 Electro Optical Targeting System. TAI supplies production hardware that go into every F-35 production aircraft (see below under Northrup Grumman).

ROKETSAN and Tubitak-SAGE are the Turkish joint leadership team who strategically manage the development, integration, and production of the advanced precision-guided Stand-off Missile (SOM-J) which will be carried internally on the 5th Generation F-35 aircraft. Additionally, Lockheed Martin Missiles and Fire Control has partnered with Roketsan, through a teaming agreement, to jointly develop, produce, market and sell the advanced, precision guided Stand Off Missile – Joint Strike Fighter (SOM-J)².

Additionally, Turkish companies are going to have a significant role supporting Lockheed Martin and Pratt and Whitney for F-35 aircraft sustainment and F135 engine production and sustainment. The Turkish state has been given the approval to build its own F135 engines and was also selected to have the first European Regional F135 Engine depot overhaul capability³.

Lockheed Martin also engaged in a joint venture project with Turkish Aerospace Industries to co-produce F-16 Fighting Falcons. The Turkish state produced 75% of its own order of fighter jets in-house, based on Lockheed's expertise and systems⁴. As of 2017, upgrades were being carried out jointly by the two companies on Turkish soil⁵.

1 <https://www.f35.com/global/participation/turkey-industrial-participation>

2 <https://www.f35.com/global/participation/turkey-industrial-participation>

3 <https://www.f35.com/global/participation/turkey-industrial-participation>

4 <https://www.lockheedmartin.com/en-us/who-we-are/international/turkey.html>

5 <https://www.defensenews.com/air/2017/07/17/turkish-f-16-jets-to-get-structural-upgrades/>

BAE SYSTEMS: TECHNOLOGY AND CONCEPTUAL SUPPORT FOR TF-X INDIGENOUS FIGHTER JET

British company BAE Systems is Europe's largest arms dealer.

In a recent interview highlighting the "bright future" for BAE Systems in Turkey, a spokesperson summed up the trends identified in this report: "Our strategy is reflected in the increasing number of partnership ventures performing at a technology rather than product level. The bringing together of technologies from BAE Systems and from Turkish industry to develop future solutions for the international market is at the heart of what we do."¹

BAE Systems now employs over a thousand people in Turkey, through its joint venture holdings as well as some in its local office. In 2015 it established a joint-venture company in which it holds a 49% stake, Nurol BAE Systems. This company has itself embarked on a new engine development partnership with a German company².

The TF-X programme to develop a next-generation, indigenous fighter jet is one of Erdoğan's prestige projects. Under a \$125 million agreement, BAE Systems is providing know-how for the program's conceptual design phase. On April 26 2018, Turkish state-controlled companies TAI and Aselsan signed a memorandum for their cooperation in developing this aircraft and a radar, electro-optical systems, mission-control systems and so forth.³

World ranking: #4
Arms sales in 2017:
\$22.9 billion

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NORTHOPP GRUMANN: OUTSOURCED CONSTRUCTION OF F-35 FIGHTER JET FUSELAGES

TAI is also a second source supplier of F-35 centre fuselages to Northrop Grumman, a principal member of the Lockheed Martin-led F-35 industry team. The manufacture of this critical component is entirely outsourced to the Turkish company, again on the basis of Northrop Grumman training on how to build the fuselage.⁴

In conjunction with Northrop Grumman, TAI manufactures and assembles the center fuselages, produces composite skins and weapon bay doors, and manufactures fiber placement composite air inlet ducts.

Aselsan is part of the development of the F-35 Electro Optical Targeting System and together with Northrop Grumman they are soon to be producing the F-35 CNI Avionic Interface Controller⁵.

Moreover, the only overhaul facility for Britain's F-35s is located in Turkey, meaning the British government will be reliant on the Turkish state to keep its own fleet active⁶.

World ranking: #5
Arms sales in 2017:
\$22.4 billion

1 <https://www.defenceturkey.com/en/content/bright-future-for-bae-systems-partnerships-in-turkey-3120>

2 <http://www.defenceturkey.com/en/content/nurol-bae-systems-performed-partnership-with-germany-companies-developed-motor-control-system-2701#.XFG4YVwzblU>

3 <https://www.defensenews.com/industry/2018/05/24/is-the-us-out-as-turkeys-top-western-arms-dealer/>

4 <https://www.materialstoday.com/composite-applications/news/northrop-grumman-expands-composites-training-for/>

5 <https://www.f35.com/global/participation/turkey-industrial-participation>

6 https://www.theregister.co.uk/2017/10/19/f35_fighter_engines_turkey_overhaul/

THALES: THE JOINT-VENTURE GÖKTÜRK SPY SATELLITE

World ranking: #8

Arms sales in 2017:
\$9 billion

8

World top-10 arms company Thales is partially owned by the French state (25.8%¹). In 2009, it established the daughter company Thales Ulaşım Sistemleri (Thales Transportation Systems) in Turkey². This company delivers installation, site tests and commissioning, software tests, maintenance, project management and training capabilities.

In 2002, Thales created the joint-venture Yaltes along with a Turkish partner. Yaltes locally provides technologies, system integration solutions and system lifecycle support in the fields of Maritime Warfare Management Systems, Integrated Platform Control & Monitoring Systems for Vessels, and Network-supported Abilities. In 2011, Thales took over Yaltes³.

Thales and ASELSAN signed a cooperation agreement in 2015 to continue the joint development of a Missile Launcher System⁴. The cooperation between the two companies was initiated in 2010 and first stage firings of an integrated Missile Launcher System and LMM were demonstrated in 2014.

Thales and the Turkish industry have been working closely together on several programs, including 3D Radar Modernization, Helmet Mounted Sight Display with Aselsan, Genesis with Havelsan and Göktürk with TAI⁵.

They are key players in the Göktürk -1 project, a Turkish spy satellite which is “used primarily in Turkey’s eastern and southeastern regions, as well as in Iraq and Syria.”⁶ The satellite is now in orbit and in use by the Turkish military. This project involves both direct sales to the Turkish state, and joint-venture development on the ground.

Telespazio (Rome, Italy) and its sister company TAS (Thales Alenia Space) are the prime developers of the Göktürk-1 spacecraft⁷. The satellite uses the Proteus multimission platform. The Italian-French contractor also delivered a satellite assembly integration and test facility to be built by the Turkish state-owned TAI A.S. (Turkish Aerospace Industries, Inc.) with assistance from TurkSat, the Turkish state’s national telecommunications operator.

1 <https://www.thalesgroup.com/en/global/about-us>

2 <https://www.thalesgroup.com/en/countries/eurasia/turkey>

3 <https://www.thalesgroup.com/en/countries/eurasia/turkey>

4 <https://www.thalesgroup.com/en/worldwide/defense/press-release/thales-et-aselsan-signent-un-nouvel-accord-de-cooperation-dans-le>

5 <https://www.thalesgroup.com/en/countries/thales-eurasia>

6 <http://www.hurriyetdailynews.com/turkey-launches-space-satellite-gokturk-1--106936>

7 <https://directory.eoportal.org/web/eoportal/satellite-missions/content/-/article/gokturk-1>

Other major arms dealers

MBDA: Erdoğan & Macron award missile contract to wholly-owned Turkish daughter company

MBDA is a trans-European conglomerate formed as a joint venture by a merger of the guided missile divisions of Airbus, Leonardo, and BAE Systems¹. MBDA owns Turkish company Eurosam. The Turkish state has awarded Eurosam a contract for the definition study of the future Turkish Long Range Air and Missile Defence System.

The contract award was made during a meeting between Erdoğan and French President Emmanuel Macron on 5 January 2018 in Paris².

World ranking: #26
Arms sales in 2017:
\$3.4 billion

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Airbus: \$500 million 5A/B satellite project subcontracted to Turkish state-controlled businesses

Aerospace and arms company Airbus is partially owned by the French government (11.1%)³.

On 9 November 2017 Turksat, the Turkish state-run satellite operator, signed a contract with Airbus Defence and Space for two new-generation communications satellites, Turksat 5A and Turksat 5B.

Though these satellites are for civil use, Turksat is “an important stakeholder of the defence and aerospace industry” and the chairman of Turksat’s board of directors emphasised the links between their aerospace developments and the booming Turkish defence industry in a recent interview⁴.

Turksat officials say the contract to build and launch satellites will be worth about \$500 million. For those two satellites, the local contractors are Aselsan and Turkish Aerospace Industries, or TAI. The local satellite, 5B, will cost \$141 million according to officials⁵.

In a new deal penned at the time of the Afrin invasion, Airbus committed to acquisitions worth \$5 billion from the Turkish industry between 2020 and 2030⁶.

World ranking: #7
Arms sales in 2017:
\$11.2 billion

1 <https://www.revolvy.com/folder/Guided-missile-manufacturers/155481>

2 <https://www.upi.com/Defense-News/2018/01/05/Turkey-commissions-study-for-future-missile-defense-system/3431515175919/>

3 <https://www.marketscreener.com/AIRBUS-SE-4637/company/>

4 http://www.milscint.com/en/files/2017/06/MSI_TDR_39_idf2017-TURKSAT.pdf

5 <https://www.defensenews.com/space/2017/11/13/airbus-to-build-spacex-to-launch-turkeys-2-new-satellites/>

6 <https://www.dailysabah.com/defense/2018/01/25/airbus-to-buy-7b-worth-of-goods-from-turkish-suppliers-until-2030>

Leonardo: rebranding and expanding in Turkey

World ranking: 9

Arms sales in 2017:
\$8.8 billion

Top-10 company Leonardo is part-owned by the Italian state (30.2%)¹. It has long operated a subsidiary company in Turkey under the name of Selex ES Elektronik Turkey. This company is now being rebranded and expanded, as Leonardo “Doubl[es] their network of international branches, joint ventures and subsidiary companies.”

“The relatively strong and improved results of Selex ES Elektronik Turkey AS, which reflect investment and a significant turnaround effort in the last few years, have resulted in a growing number of high technology products that are now manufactured, supported and sold directly by Selex ES Elektronik Turkey AS to the Turkish market and to other export markets,” a representative said in a recent interview.

United Technologies Corporation: Turkish military vehicle systems being produced in Turkish joint-venture project

World ranking: #11

Arms sales in 2017:
\$7.8 billion

US giant United Technologies Corporation launched a new project in 2018 to produce automatic fire/explosion suppression systems for military ground vehicles in collaboration with Alp Aviation systems at their Turkish base. These ground vehicles will be used by the Turkish army².

L-3 Communications: joint venture radar project

World ranking: #12

Arms sales in 2017:
\$7.8 billion

L-3 communications owns 40% of AYESAŞ, a joint venture project with the Turkish Zorlu Group³. AYESAŞ focuses on mobile radar and technology solutions.

Textron: outsourcing servicing work to Turkey

World ranking: #20

Arms sales in 2017:
\$4.1 billion

In 2016, arms company Textron announced it was outsourcing servicing work to Turkish company Genel Havacilik (General Aviation)⁴.

1 <https://www.marketscreener.com/LEONARDO-162001/company/>

2 <http://www.utc.com/News/UTAS/Pages/UTC-Aerospace-Systems-Signs-Agreement-with-Alp-Aviation-to-Begin-Phased-Productio.aspx>

3 <https://www.epicos.com/company/13291/aydin-yazilim-ve-elektronik-san-ayesas>

4 <https://investor.textron.com/news/news-releases/press-release-details/2016/Bell-Helicopters-Service-Network-to-Grow-in-Turkey/default.aspx>