Over the last 3–5 years, Turkey has rapidly emerged as a new global exporting power of military unmanned aerial vehicles (UAVs), commonly known as drones. Turkish-made drones have played important roles in the Ukrainian resistance against the Russian invasion and in Azerbaijan’s success in the 2020 Nagorno-Karabakh war. Elsewhere, including in Ethiopia, Libya, and in the Kyrgyzstan-Tajikistan border, their use has been surrounded by polemic. They have also been used by Turkey in operations against Kurdish forces both at home and abroad. Drones have granted the Turkish government a new instrument of foreign policy, projecting it as a regional rising power, and have myriad implications in regional and international politics, including as providing a model to be followed by other emerging powers.

Brief Points

- Turkey has become a major international exporter of military drone technology. This has enabled the Turkish government to acquire soft power, establish new partnerships, and engage in new geopolitical arenas.
- The lack of transparency and formalized proceedings surrounding arms exports in Turkey prevent a deeper scrutiny of these political decisions, as well as an assessment of the real economic impact of drone exports.
- There are a number of controversies over Turkish drone exports to conflict regions, including alleged human rights violations by end users. In the absence of binding international regulations surrounding military drone export, such debates are likely to continue.
- A narrative of success surrounding Turkish drones is contributing to the proliferation of these weapons.
Introduction

In recent years, with an upsurge since the beginning of the war in Ukraine, Turkish-made drones have attracted attention from countries around the world. Even though different Turkish companies (including Baykar, Turkish Aerospace, STM, Lentaken and Roketsan, among others) have produced different types of drones, it is the combat drones produced by Baykar – mostly the Bayraktar TB2 and Akıncı models – that are in greatest demand. Somewhere between 24 and 27 countries have acquired TB2s and 5 countries have acquired Akıncı (there exists no official inventory). While data surrounding Turkish military drones is difficult to access, and little can be found in public reports, this represents a highly significant proliferation of drone technology. Turkish armed drones are now becoming an important tool for armies in Europe (e.g. Poland and Ukraine), Africa (e.g. Ethiopia, Togo, Niger, Libya), the Middle East (e.g. Qatar, UAE) and Asia (e.g. Kyrgyzstan, Azerbaijan, and Pakistan).

Drone exports have provided a boost to the country’s military-industrial base. According to the umbrella organization for Turkey’s defense and aerospace manufacturers, SaSAD, total business in 2021 reached $10.1 billion, exports amounted to $3.2 billion and Turkish companies won new orders worth $8.5 billion (Bekdil, 2022a). The numbers for 2022 will certainly show further increases.

This policy brief covers the recent developments in the Turkish drone sector and analyzes them in the wider context of a transformation of Turkish foreign policy. Military drones have provided the government in Ankara with a major new foreign policy tool. Research for this brief is based on fieldwork conducted in Ankara and Istanbul in November 2022, as well as multiple reports produced in Turkey and beyond on the Turkish drone market, the most important of which are listed in the Further Reading.

The emergence of Turkey as an important exporter of military technology, particularly drones, has major implications. It enables Turkey to create new geopolitical alliances and to intervene in new areas through partnerships in military technology sales and ensuing maintenance and upgrade. It brings a financial impetus to the strained Turkish economy and fosters the creation of qualified jobs. And it brings some soft power associated with reputational gains: today, many are still fascinated by drones as a cutting-edge technology that can solve many operational problems. The reported impact of Turkish drones in the early stages of the Ukraine war has projected an image of a modern, technologically-advanced Turkey.

There are also wider implications for regional and international security. Some of the Turkish drones available on the market are significantly cheaper than those offered by the more established producers in the United States and Israel. Additionally, as will be discussed further, the mechanisms for arms export controls in Turkey are less formalized and less stringent than the ones in, for example, the US and most European countries. The combination of these two factors has led to a wide interest in Turkish drones from countries that traditionally have neither the defense budgets to acquire the most expensive military technology nor the geostrategic relations with Israel and the US to gain access to their technology. In practice, the recent availability of Turkish drones gives prospective customers both broader choice and cheaper deals. In this way, Turkey is widening the access to drone technology, a trend to which China, Iran and other countries are also contributing.

The Wider Context: Origins of the Drone Program

Many observers have pointed to how quickly Turkey emerged as an important drone power. But, of course, recent developments follow a much longer path in which the country’s military-industrial base has been geared towards gaining strategic autonomy. From this perspective, our argument that developing, using, and exporting drones is part of Turkey’s quest for strategic autonomy acknowledges that debates surrounding this same autonomy go decades back in time. We understand strategic autonomy to refer to the capacity to make security and defense decisions independently, without always having to depend on third-party agreements and capabilities.

Three particular incidents are formative in Turkey’s quest for strategic autonomy, particularly in the field of drones. The first is related to the US’ arms sanctions on Turkey following its Cyprus intervention in 1974, which generated a sense in Ankara that Turkey had to become increasingly self-sufficient in military capabilities. The second is related to the problems surrounding the country’s acquisition of drone technology from Israel. When Turkey opened a tender in the early 2000s to acquire military drones, it was a US supplier (General Atomics) that was preferred, but this eventually fell through due to Turkey’s demand that the drone would use Turkish-made cameras, still to be developed. The US competitor withdrew their bid and the Israeli joint venture Elbit-IAI stepped forward, but when the Turkish camera was finally ready, it was significantly heavier than what the Israeli Heron-1 drone was capable of taking, which demanded adaptations. While these were being made, Turkey leased alternative Israeli drones that were of weaker capacity, leading to some operational and technical problems at a moment when Turkey was stepping up counter-terrorism activities. The whole process took several years (2004–2010) and generated the conviction that Turkey’s operational needs could not be filled by Israeli technology. Thirdly, as stated by Arda Mevlütoğlu (2022a), the US’ “reluctance to provide the armed versions of the Predator drones in the mid-2010s stimulated Türkiye to start a program on arming” their indigenously-produced military drones.

The Turkish Aerospace Industries had been developing their different Anka drones when Selçuk Bayraktar, MIT researcher, son of an industry owner, and future son-in-law of Erdoğan (he would marry Sümayye Erdoğan in 2016), returned to Turkey and mobilized the financial and political resources to accelerate the development of Turkish military drones. The Bayraktar TB2 entered service in 2014 and the Anka entered service in 2018 (Mevlütoğlu, 2022a). Their first missions occurred in Turkish territory in 2016 and afterwards in the borders of Iraq and Syria in operations against Kurdish militaries.

The Foreign Policy Context

Turkish foreign policy has undergone significant shifts in the over two decades of Justice and Development Party (AKP) rule. Until 2010, the AKP pursued the role of “mediator and integrator,” based on a “logic of interdependence” (Kutlay & Öniş, 2021) in which it sought to build relations through the soft power tools of trade and multilateral diplomacy. Efforts were made at improving regional relations and developing Turkey’s mediator role (notably between Israel and Syria in 2007–08).

With the start of the Arab Uprisings, Turkey adopted a more interventionist role in its
neighbourhood and beyond placing a much stronger emphasis on the military aspect of its foreign policy (Çoşkun, 2015). More recently, the interplay between domestic and foreign policies has become even stronger, with the latter emphasizing security concerns, often successfully articulated to garner support from the AKP’s electorate. The concentration of power in the office of the Presidency after 2018 and a domestic political landscape defined by populist nationalism have also reinforced the militarization of Turkish foreign policy. Furthermore, Turkey’s path to increased military assertiveness can be explained by systemic and regional dynamics. At the systemic level, the shift in global hierarchies of power—including the rise of emerging powers—and the diminishing engagement of the US in the Middle East has opened up a space for the ascension of new competitors for regional leadership, such as Russia, Iran and Saudi Arabia. The policy of strategic autonomy which defines Turkey’s present foreign policy trajectory can be better understood against the background of global power shifts, regional instability, and the regime’s consolidation of power at home. Not least due to disappointment with EU and US policies towards Turkey over time, interest-based interactions have become the modus operandi in relations with traditional allies in the West. 

Turkey’s drone program is an outcome of the logic of transactional interdependence. Besides the widely covered use in the Ukraine war, Turkish drones have been used in several conflicts, most importantly in the second Nagorno-Karabakh war (2020), which has been described as the first conflict in which an unmanned aerial vehicle won a war from the air (Kasapoğlu & Özkaraşahin, 2022: 25). In short, drones enable Turkey to engage in contexts where they would otherwise not have engaged, paving the way for greater military activism without cost for one’s own citizens. 

The defense and aerospace industry also presents important economic opportunities for Turkey. Turkey’s annual defense and aerospace exports exceeded $4 billion for the first time in 2022. The Turkish Exporters’ Assembly (TIM) noted an increase of 35.7% from 2021 to 2022 (for a period from January to November), mainly attributed to aerospace, including domestically manufactured drones. Selçuk Bayraktar, chief technical officer for Baykar, noted on 22 December that exports made up 98% of the company’s 2022 revenue (Bekdil, 2022b). The defense and aerospace industry as a whole spends $1.6 billion annually on research and development (Bekdil, 2022a). This is an investment in the future as analysts predict growth in the global military drone market spurred in part by the rise in defense expenditures following the Ukraine war.

The success of Turkey’s drone program, particularly its development as an indigenous and technologically advanced part of the defense industry, is regarded by most political actors as a source of national pride, which limits critical discussions (see Soyaltin-Collela & Demiryol, 2023). Turkey’s strained relations with traditional allies today stand in contrast to the success of its role in the war in Ukraine, where the AKP has illustrated the value of strategic autonomy through serving as an intermediary toward Russia while supplying drones to Ukraine. Finally, in a wider context, national self-perceptions of Turkey’s identity as a military power fall on fertile ground given the country’s “founding myth” as a military-nation (Altunay, 2004).

Beyond the Official Narrative

There are significant issues surrounding Turkey’s official export control policy. Current procedures and decision-making processes are highly centralized. Formally, the Ministry of Defense is the key actor; it enforces export control regulations by approving licenses for materials, systems and sub-systems. It can consult other state institutions, such as Turkish intelligence, the national police and the foreign office, and ask them to evaluate a specific exporter applying for a license (Kasapoğlu & Özkaraşahin, 2022). But, in practical terms, most critical decisions are made by the President’s office.

The export control regulation states that the Wassenaar Arrangement and the Missile Technology Control Regime form the basis of decisions, although neither of the two are legally binding. At the same time, the Ministry of Defense comes under the Turkish Presidency whose power has increased enormously in recent years, as mentioned above, rendering the foreign office and other ministries almost irrelevant. Meanwhile, unlike various other major drone exporters such as the US, where congressional approval for international sales is required, there is no parliamentary oversight over Turkey’s export procedures and decisions (Kasapoğlu & Özkaraşahin, 2022). Also, while there is a favorable, and highly-visible, state-sponsored media coverage, public debate on the matter is limited. Then, there are confidentiality concerns, since a good number of Turkish drone clients are not disclosed (Dız, 2022). As such, Turkish export policy is similar to that of Israel: international arms sales follow a strict confidentiality principle, justified by their clients’ national security concerns, while parliamentary approval on export decisions is not needed. Instead, Israeli defense contractors are required to assess the potential risks of their products being deployed in human rights violations. Another problematic aspect of Turkey’s drone exports is related exactly to human rights violations. Among Baykar’s clients are countries engaged in civil wars and in border disputes. One controversy revolves around the deployment of Bayraktar TB2 armed drones in Ethiopia, where the two parties of the conflict – the Ethiopian government and the Tigray Defense Forces – have been involved in severe human rights violations. Eye-witnesses and munition remnants indicate civilian casualties caused by drone warfare. Satellite images verified the presence of a Bayraktar drone at the Harar Meda military airport, which is the main airbase of the Ethiopian Air Forces.

A second controversy relates to the alleged utilization of a Turkish drone model with full autonomy in Libya. In their letter to the Security Council dated 8 March 2021, the Panel of Experts on Libya used an imagery of the remnants of a downed loitering munition and claimed that this Turkish-originated STM Kargu-2 drone, which is “programmed to attack targets without requiring data connectivity between the operator and the munition: in effect, a true ‘fire, forget and find’ capability” (United Nations Security Council, 2021: 17) “is now fully operational over Libya” (United Nations Security Council, 2021: 148). The Panel further stated that this is a breach of Resolution 1970 (2011), paragraph 9, calling for an arms embargo on Libyan Arab Jamahiriya by all Member States. While the accuracy of the facts surrounding this episode is disputed, it does beg the question of what consequences the absence of international regulation on drone exports carry and who benefits from the situation in not just economic but also geostategic terms. Indeed, there is a sense that it is crucial that increasing transparency and streamlining of procedures around export controls comes into being. As mentioned by Can Kasapoğlu and Sine Özkaraşahin, it is “timely for the Turkish administration to publish an official white paper, explaining Turkey’s drone warfare paradigm, defense technological strategy, and exports policy approach. Such a
document can serve as a pioneering reference in shaping the ongoing debate about Turkish UAS” (Kasapoğlu & Özkaraşahin, 2022).

Lack of data creates transparency concerns regarding state-market relations. As specified by one of our respondents, the following questions remain unanswered: Why are Bayraktar drones much cheaper than their domestic and international counterparts? What is the amount of state subsidies to the company compared to other domestic producers and what procedures do such financial decisions follow? These questions are extremely relevant and timely for political accountability and transparency. The availability of credible data will help in assessing the official narrative that this industry is boosting the Turkish economy.

**Concluding Thoughts**

Access to drone technology lowers the threshold for its users to engage in armed conflict. The proliferation of drone warfare, spurred by a growing number of suppliers, has the potential to escalate conflicts and facilitate the employment of lethal force by warring parties. From an arms control perspective, the proliferation of new lethal technology is never positive, despite optimistic rhetoric about precision and discrimination. And while in conventional war settings drones can contribute to a levelling of the playing field, drones can also be a new tool of repression that authoritarian states can use against their own population. There are risks that many newcomers to drone acquisition can be placed in that category.

As debates surrounding drone technology increasingly focus on issues of proliferation and on the growing levels of autonomy of these systems, the developments in Turkey offer important pointers for further research, particularly as this quest for strategic autonomy through military technology can become a model to be emulated by other countries.

**Notes**

1. Interview with Arda Mevlütoğlu, Ankara, 9 November 2022. See also Mevlütoğlu (2020: 143–144 and 2022b: 1).
2. Interview with security scholar, TEPAV, 7 November 2022, Ankara.
3. Interview with security scholar, SETA, 8 November 2022, Ankara.
4. The official claim for Bayraktar drones is that they consist of approx. 90% Turkish-made components. These numbers are difficult to verify and should be taken with caution. Some critical components still have a foreign origin, but decreasingly so.
6. Interview with security scholar, 7 November 2023, Ankara.

**Further Reading**


**The Authors**

Bruno Oliveira Martins and Pinar Tank are Senior Researchers at PRIO.

Beste İşleyen is Associate Professor in Political Science at the University of Amsterdam.

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