



2023, 12 (1), 1-21 | Research Article

The Effects of Turkish Defense Industry's Transformation on Turkish Foreign Policy

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Abstract

Türkiye aims to attain self-sufficiency with the transformation of its defense industry by state-centered and private sector investments as collaboration in the last decade. This paper presents new evidence on the effects of Turkish defense industry's transformation on Turkish foreign policy by analysing the role of private defense sectors collaborated with the state institutions that are innovative and competitive as in today's global environment. The main purpose of the article is to verify the claim that the developed, nationalized and localized Turkish defense industry is instrumental in taking more confident steps in Turkish foreign policy. Türkiye has been in a defense transformation since the early 2000s by focusing on a self-reliant and techno-nationalist model by allocating national security resources with the awareness of today's world conflicts on energy, defense, security, and the experience of Cyprus crisis of 1974 and the ongoing fight against terrorism in a historical perspective. This geopolitical and strategic status of Türkiye and the resilience of Turkish defense industry have also emerged opportunities and challenges for Turkish foreign policy. Furthermore, it is observed that the transformation of Turkish defense industry has presented political and economic commitments for the future. The paper also sheds light on Türkiye's allocation national resources and collaboration with especially private sector in the transformation process. As a result, in this article, it is concluded that Türkiye's increasing its military presence beyond its borders by exporting national weapons, active operations, military bases and peacekeeping missions means that it has adopted an active and assertive foreign policy. Qualitative research method has been used to reach this result together with primary and secondary sources. Information has been obtained directly from the websites of companies such as Roketsan, Havelsan, Baykar technology, STM, BMC. The defense article of İsmail Demir, President of the National Defense Industry of Türkiye, and the studies of researchers who wrote academic articles about the Turkish defense industry such as Sezgin, Seren, Adar, Yeşiltaş, Sekine, Öniş and Sakman have been referred. Apart from these, the DefeseNews website, which provides annual updated lists of the world's most powerful defense companies, has also been used.

Keywords: Türkiye, Defense Industry, National Security, Resources, Turkish Foreign Policy.

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2023, 12 (1), 1-21 | Araştırma Makalesi

Türk Savunma Sanayisinin Dönüşümünün Türk Dış Politikasına Etkileri

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Öz

Türkiye, savunma sanayisini son on yılda devlet merkezli ve özel sektör yatırımları ile dönüştürmeye gayret göstermekte ve kendi kendine bu alanda yeterlilik kazanmayı hedeflemektedir. Bu makale, yenilikçi ve rekabetçi olan devlet kurumlarıyla işbirliği yapan özel savunma sektörlerinin rolünü analiz ederek, Türk savunma sanayisinin dönüşümünün Türk dış politikası üzerindeki etkilerine dair yeni kanıtlar sunmaktadır. Makaledeki temel amaç, gelişen, millileşen ve yerleşen Türk savunma sanayisinin Türk dış politikasında daha özgüvenli adımlar atılmasına vesile olduğu iddiasını doğrulamaktır. Bilindiği gibi Türkiye, Avrupa, Asya ve Afrika'nın orta noktasında yer almaktadır. Türkiye'nin jeopolitik önemi, Soğuk Savaş'ın sonuna kadar azalmasına rağmen, enerji yollarının ortasında yer alması nedeniyle stratejik açıdan halen devam etmektedir. Türkiye 2000'li yılların başından itibaren kendi kendine yeten ve tekno-milliyetçi bir modele odaklanarak bir savunma dönüşümü içerisinde. Bunu yaparken Türkiye, günümüz dünyasında yaşanan enerji, savunma, güvenlik ve 1974 Kıbrıs krizi tecrübesinin ve teröre karşı süregelen mücadelenin bilinciyle ulusal güvenlik kaynaklarını tarihsel bir perspektifte tahsis etmektedir. Türkiye'nin bu jeopolitik ve stratejik konumu ve Türk savunma sanayisinin dayanıklılığı, Türk dış politikası için de fırsatlar ve zorluklar ortaya çıkarmaktadır. Ayrıca Türk savunma sanayisindeki dönüşümün geleceğe yönelik siyasi ve ekonomik taahhütler sunduğu da görülmektedir. Dolayısıyla bu makalede dönüşüm ve değişim sürecindeki Türkiye'nin özel sektöre de ulusal kaynak ayırmasına yer verilecektir. Sonuç olarak bu makalede, Türkiye'nin, milli silahlar, aktif operasyonlar, askeri üsler ve barışı koruma misyonları ihraç ederek askeri varlığını sınırlarının ötesinde arttırmasının aktif ve iddialı bir dış politika benimsediği anlamına geldiği sonucuna ulaşılmıştır. Bu sonuca ulaşmak için nitel araştırma yöntemi kullanılmıştır. Ayrıca, makalenin konusuyla alakalı birincil ve ikincil kaynaklara başvurulmuştur. Roketsan, Havelsan, Baykar Teknoloji, STM, BMC gibi şirketlerin web sitelerinden doğrudan bilgi alınmıştır. Türkiye Milli Savunma Sanayi Başkanı İsmail Demir'in savunma makalesi ve Sezgin, Seren, Adar, Yeşiltaş, Sekine, Öniş ve Sakman gibi Türk savunma sanayisi hakkında akademik makaleler yazan araştırmacıların çalışmalarından istifade edilmiştir. Bunların dışında, dünyanın en güçlü savunma şirketlerinin yıllık güncel listelerini veren DefeseNews internet sitesinden faydalanılmıştır.

Anahtar Kelimeler: Türkiye, Savunma Sanayii, Ulusal Güvenlik, Kaynaklar, Türk Dış Politikası.

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Introduction

There are significant changes in the market and international arms production since the 1990s. This change is defined as the 'globalization' of defense production. What this transformation includes is a residual degree of collaboration among the defense companies. Kurç and Bitzenger state that globalisation, to some extent, leads an adoption of market liberalization, an export-oriented defense-industry policy, industrialization policies about integrative defense and privatization. They believe that collaborative relationships may relieve the pressures on the defense firms and national budgets (2018, p. 255). For other analysts, globalization is not effective as assumed on the integration and collaboration between defense firms and the level of integration and collaboration varies from region to region. In other words, the development paths of defense industrialization differ from country to country while globalisation urges countries to follow a restricted defense industrialisation. In the Asian region, the major arms-producing countries have mostly adopted techno-nationalist model. The countries focus on self-sufficiency and aim to decrease dependency. Their general characteristics is the protection of their defense industries and the permission on limited investment for foreign companies. As one of them, Türkiye also aims to attain self-sufficiency with the transformation of its defense industry by state-centered and private sector investments as collaboration in the last decade. On the other hand, Both Türkiye and the other countries adopted techno-nationalist model also face some opportunities and challenges for their foreign policies in view of the global rivalry on the international arms production and market.

Although the article titled "Transformation of the Turkish Defense Industry" by İsmail Demir, President of the National Defense Industry of Türkiye, is the most authoritative source on this subject, it did not mention the impact of the national defense industry on Turkish foreign policy. Studies of researchers such as Sezgin, Seren, Adar, Yeşiltaş, Sekine, Öniş and Sakman, who conduct research on the defense industry in Türkiye, did not sufficiently address the effects of domestic and national industry on Turkish foreign policy. Apart from these, the DefeseNews site, which provides annual updated lists of the world's most powerful defense companies, was also used. Information was obtained directly from the websites of companies such as Roketsan, Havelsan, Baykar Makine, STM and BMC. As a result, in this study, qualitative research method has been used together with primary and secondary sources. Meanwhile after submitting an official letter to the United Nations, the country's name has been officially changed from Turkey to Türkiye at the UN. Thus, the new name is going to be used in this article.

Turkish defense industry with a strong historical background has long had a self-reliant model and managed to present its place in the global environment. This structure of Turkish defense industry went back to the ascent of the Ottoman Empire by manufacturing war materials and tools in the Imperial Cannon Foundry such as gun powder and cannons. The manufacture capacity was far beyond the others in Europe. But, the defense industry in Türkiye strove for keeping up with technological improvements in Europe from the fall of the Ottoman Empire to the end of the First World. The recreation process of the defense industry started at the outset of the Republic period by the support of state for setting national defense industry in spite of economic, technological and infrastructural challenges. During the first years of the

Republic, many significant weapon, cannon and ammunition investments by the state and private sector were constructed such as the construction of the General Directorate of Military factories, the *Gölcük* Naval Shipyard and Airplane and Motor Turk Company as the private firms. The second period of Turkish defense industry (1939-1974) was shaped by the effects of World War II and Türkiye's membership in NATO. Türkiye tried to sustain its investments in defense industry with the private firms in that period in spite of economic challenges and domestic political upheavels. In this context, the airplane factory by Turkish Aviation Association in 1941 and the General Directorate of Machinery and Chemical Industry Corporation in 1950 were established as state-owned enterprises (Demir, 2020, p. 22).

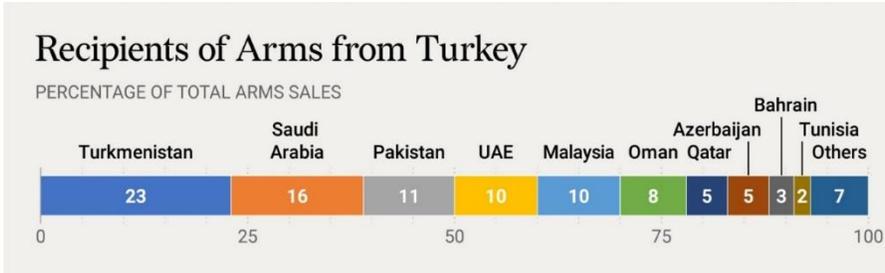
In that period, Türkiye's political choices and priorities in the context of its foreign policy played a significant role in the development of defense industry. Besides, Türkiye's financial capacity, security policy and threat perception were the other effects of defense industry development. The third period of Turkish defense industry (1974-1985) was shaped by the Cyprus crisis in 1974 and its political and economic outputs. The crisis enhanced Türkiye's need for defense tools and equipment from its allies in NATO. But, the U.S.' arms embargo and some of other allies' drawbacks compelled Türkiye to establish a modern defense industry infrastructure and security policy concept. Besides, Türkiye was lonely in the context of its foreign policy in the international system and Türkiye was in a foreign-dependent position economically. This period produced an intricate structure for Turkish foreign policy and caused the ascent of nationalistic public cognizance on the necessity for national defense industry development. The fourth period (1985-...) constitutes a turning point for Turkish defense industry. The first attempt was the establishment of 'Defense Industries Research and Development Institute (SAGE)' in 1985. The other one was the modernization and reorganization of the TAF (Turkish Armed Forces). In those years, the main focus was on using national resources, new procurement model, domestic production and original design. In particular, Türkiye has covered a distance on defense industry in the last decade and reduced foreign-source dependency. Türkiye's technological depth and global effectiveness in defense industry have increased incrementally, but the transformation and rise of Turkish defense industry have not yet revealed the expected results in terms of Turkish foreign policy and economy. It has just presented political and economic commitments for the future.

In this paper, we investigate the outputs of the transformation in Turkish defense industry in terms of Turkish foreign policy. The paper also sheds light on Türkiye's allocation national resources and collaboration with private sector in the transformation process. The paper is organized as follows. Section 2 contains the expenditure of Turkish defense industry. Section 3 analyses the defense procurement and industry policy in Türkiye. In section 4, we present how Türkiye has allocated national security resources in the transformation process. Section 5 explains the opportunities and challenges for Turkish foreign policy revealed by the transformation of Turkish defense industry.

Türkiye's defense industry strategy and policy

Türkiye has been in a military activism and produced pretentious policies since the last decade by allocating national defense capacity and resources. Türkiye aims to be a

major power in its region, to gain an autarchy and take an action in its foreign policy, so Türkiye has eagerly invested in national defense industry. It has already led to an evocative progression for 10 years by shifting Türkiye from the world's third-biggest recipient of arms to the 14th biggest arms exporter. Moreover, Türkiye has been described as an 'emerging producer' with the aim of increasing production abilities in naval, air, land, electronics, and ammunition (Béraud-Sudreau et al., 2020).



Source: Lucie Béraud-Sudreau, Diego Lopes da Silva, Valexandra Kuimova and Pieter D. Wezeman, *Emerging Suppliers in the Global Arms Trade*, SIPRI, https://www.sipri.org/sites/default/files/2020-12/sipriinsight2013_emerging_suppliers.pdf

On the other hand, Bekdil (2021) states that Türkiye's defense and aerospace exports was \$2.279 billion in 2020, and it means there was about 17 percent decline from \$2.74 billion in 2019' thanks to CORONA pandemic. Sünnetçi (2021) also informs that 'Having closed the year 2020 with a fall by 16.8% in the export of defense and aerospace products compared to 2019, the Turkish Defense and Aerospace Industry has succeeded in maintaining the upward trend in exports which began in December 2020, carrying this momentum into the first two months of 2021, despite the negative effects of the COVID-19 pandemic and closed the first two month of the year with an increase in exports'.

Türkiye's military activism and success in defense industry in the last decade is derived from the structural and technological investments of the state and civilian authorities. The technological structure of Turkish armed forces can be grouped as the systems established with national resources, the systems established with foreign cooperation and the syaytems purchased from abroad. As it is known, the developments in defense industry in the world are highly vigorous and related to the radical changes in military technology and the state's foreign policy strategies. In other words, a state's national security strategy includes the combination of its national interests, foreign policy strategies and technological investments in defense industry. In this context, Türkiye has formed this combination and gained significant achievements in terms of its foreign policy in the last decade through the transformation of its defense industry. The main aim of Turkish defense industry policy and strategy is to supply its defense demands with its national resources, dispose of dependency and gain political achievements in terms of its foreign policy.

Since the 1980s, as the beginning of modernization of Turkish defense industry, Türkiye launched new production models based on smart supply, licensed production, co-production/technology transfer, original design and research and development. (Özlü,

2021, p. 227). The breaking point for Turkish defense industry was the U.S. embargo after Cyprus crisis (1974) and after Türkiye put into practice modern and organized defense industry plans. Türkiye's first step was to establish 'The General Directorate of Defense Equipment Enterprises' in 1983. Later, the organization took part in the 'Directorate of Defense Research and Development (SAGEB)' established in 1985. The aim of SAGEB is to evolve a self-sufficient industrial defense capacity. "Following the passing by Parliament of Law No. 3238 in 1985, the law ensured the creation of an annual fund of USD one billion and a new Secretariat of State, both dedicated to the law's stated goal" (Côte Réal-Pinto, 2017, 301).

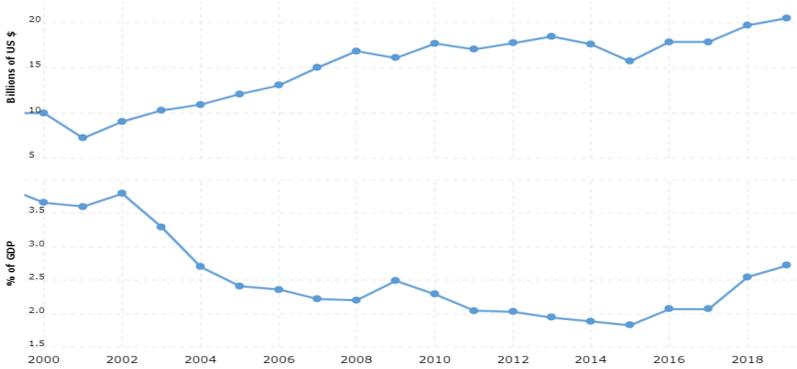
The aim of the Turkish defense industry policy and strategy approved in 1998 is to determine the tenets of short/intermediate/long-term plans for the improvement of defense industry by using national resources according to the needs for TAF. As stated in the White Paper, the main sources of defense expenditures are the resources allocated from the national defense budget, the defense industry fund, the Turkish Armed Forces Foundation resources, the Gendarmerie General Command budget, and the Coast Guard budget. Apart from these, it is also necessary to count the loans given by the companies whose repayment is guaranteed from the state or the budget of the Undersecretariat of Treasury (Özlu, 2021, p. 231).

From the early years of the Republic till the NATO membership, Türkiye mostly covered the expenses of defense from the state budget by focusing on national sovereignty. The share of defense expenses in the state budget started to decline after joining the NATO by receiving greater foreign aids from the West. On the other hand, Türkiye's defense expenses increased in the state budget in the 1970s as in the world and Türkiye needed to develop its national capacity like other countries all around the world in terms of weapon technologies. This trend of Türkiye has still gone on with the technological investments in defense industry by using national resources. While Türkiye's defense expenses were \$9.99B at the beginning of the 21st century, this increase reached at \$17.25B in 2019. Especially, Türkiye focused on original and national design programs with the collaboration of state and private sector between 2010-2021 and produced many new military equipments such as unmanned aerial vehicles, tanks, helicopters and rockets that caused to decrease Türkiye's dependency on foreign Resources (Seren, 2020, p. 186-187).

The expenditure of Turkish defense industry

Turkish defense expenditure is 2.8% of GDP and the defense budget has measurably increased between 2000 and 2019 (The World Bank, 2021). The number of Turkish armed forces is 637,821 as an active duty personnel in 2021 (Ministry of National Defense, 2021). This capacity of National Defense Ministry makes Türkiye as the 12th largest armed forces in the world and the second one in NATO.

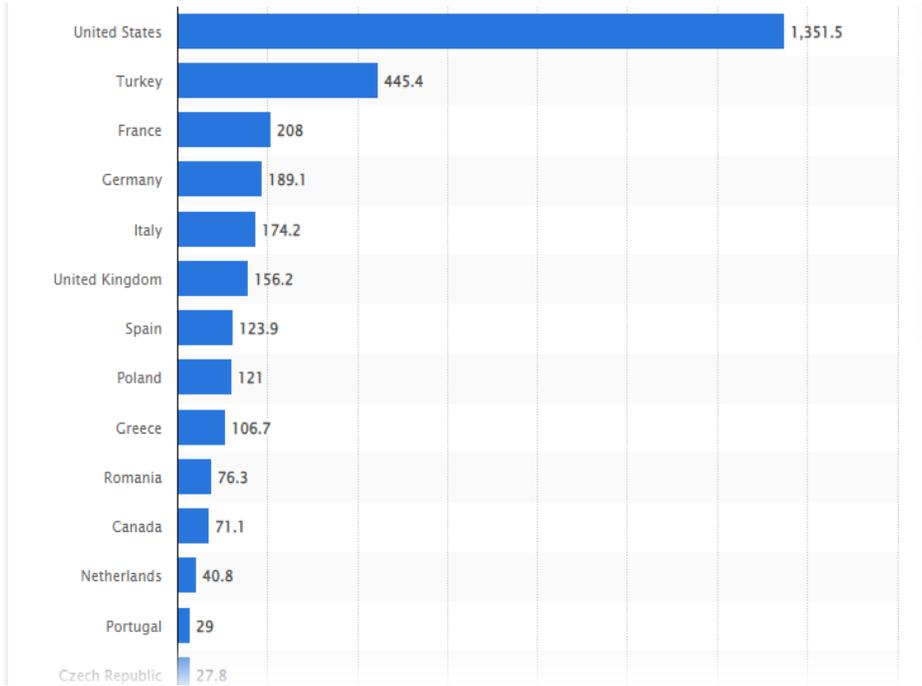
Graphic 1. Turkish military expenditure (% GDP) and defense budget (Billions of US \$) 2000-2019



Source: World Bank. 2021. "The Military Expenditure (% of GDP) – Türkiye", <https://data.worldbank.org/indicator/MS.MIL.XPND.GD.ZS?end=2020&locations=TR&start=2000>.

As the prioritization of defense industry, Türkiye's defense expenditure has constantly increased between 2016 and 2019. According to GlobalData (2021), Türkiye's budget will be expected to grow and she will continue to invest in the National defense System by 2025.

Graphic 2. Number of military personnel in NATO countries in 2021(in 1,000s)



Source: Statista. 2022. "Number of military personnel in NATO countries in 2021 (in 1,000s)", [https:// www.statista.com/statistics/584286/number-of-military-personnel-in-nato-countries/](https://www.statista.com/statistics/584286/number-of-military-personnel-in-nato-countries/).

The most initiator factors of Türkiye's defense investment are its techno-nationalist approach, the analysis of technological improvements, its residential defense sector's potential and looking for self-sufficiency in terms of locally produced military acquisitions (Bosomworth, 2021). On the other hand, Sekine states that the military in Türkiye has excessive political influence on the Turkish society, the army plays multiple roles and thus the Turkish army is characterized as praetorian militarism. According to Sekine, the Turkish army is fed by 'nationalist-militarist' ideologies. Instead of investing in human and social security, governments in Türkiye invest in securing the state militarily and providing security. This is rhetoric. This rhetoric has caused Türkiye to significantly increase its military spending since 1980. Sekine believes that if these expenditures continue in this way, high military expenditures may worsen the country's structural fragility and adversely affect the country's economy (2020).

However, Türkiye's investment in defense spending creates a complex security environment. As a matter of fact, the continental shelf problem with Greece, the Cyprus problem, the civil war and immigration wave in Syria right next to Türkiye, the conflict environment in Iraq, the problems with Armenia can be given as examples of this complex security environment (Sezgin and Sezgin, 2020, p. 335). In this context, Türkiye has still tried to increase its defense budget although it leads to social inequities, income disparities and macroeconomic instability in the country. Türkiye has focused on the struggle for national and transnational threats in the process. In fact, Türkiye has also faced with opportunities and challenges in terms of the foreign policy.

Allocating National Security Resources in Turkish Defense Industry

Türkiye has been a significant center in geopolitical term as she sits in one of the most strategic geographical locations. Türkiye is a country that has to closely monitor the geopolitical and security problems arising from its geographical location and can not remain indifferent to the problems in the Middle East, Caucasus, Black Sea and Mediterranean regions nearby. Therefore, it has to pay close attention to its own national defense security and policy. As Eslen (2003, p. 50) points out that the national security policy prepared by governments identifies the security measures that a state should take against internal and external threats. Therefore, the national security policy and defense industry of a state are extremely important.

The defense industry consists of public and private companies that design, advance and product the weapon systems necessary for a state's armed forces. Although it is very important for the defense industry to provide all the weapons and equipment needed by the armed forces of a state from the domestic industry, it is very difficult to achieve this goal. For example, the defense technologies of the Turkish armed forces, on the one hand, consist of systems and technologies produced from domestic sources, on the other hand, they also consist of systems and technologies that require technology transfer and joint production with foreign collaborations, since they can not be produced in Türkiye. In addition, the Turkish defense industry includes all other systems and technologies that fall outside of these two situations. (Özlü, 2021, p. 223). In other words, the Turkish defense industry, which has a strong historical background, consists of military factories affiliated to the Turkish Armed Forces, the Machinery and Chemical Industry Institution of the Ministry of National Defense, companies belonging to the Turkish Armed Forces Foundation and private companies. Defense industry companies are generally divided into public and private companies. In the sub-frame, it is possible to distinguish between military factories, state-owned enterprises, Turkish Armed Forces foundation companies, private companies and foreign partners (Sezgin, 2017).

Structure and features of major defense industry companies

National defense industry is Türkiye's priority as there are significant state and private defense companies whose economic size, defense expenditures, research and development (R&D) spending, the turnover, export and employment figures are impressively high. Turkish defense companies HAVELSAN, ROKETSAN, ASELSAN, TUSAŞ, FNSS, STM and BMC entered the "Defense News Top 100" list, one of the most prestigious lists of the global defense industry, in 2020 (DefenseNews, 2020). In 2017, there were only two Turkish companies in the same list. In 2021, only two companies were included in the list. However, despite this, the fact that Türkiye has reached 7 companies so far is an indication that the Turkish national defense industry is growing day by day. Seven Turkish defense companies ranked ASELSAN 48th, Turkish Aerospace Industries (TAI) 53rd, BMC 89th, Roketsan 91st, Savunma Teknolojileri Mühendislik ve Ticaret A.Ş. (STM) 92nd, FNSS 98th and Havelsan 99th on the list in 2020. While FNSS and Havelsan were included in the 2020 list for the first time, ASELSAN entered the top 50 for the first time (Hürriyet Daily News, 2021).

Military Electronics Industry (ASELSAN)

Developing the production of defense industry products and reaching the top level in this field is one of Türkiye's main strategies. This approach reflects a rational point of view because the manufacture of these products has multiple economic and technological implications. While state resources support production and R&D in this field, it is expected that the technological progress will spread to other sectors due to the industrial connections of the defense industry. Instead of importing these quality and qualified products, producing them in Türkiye saves foreign currency. It creates an opportunity to export over time.

In this context, ASELSAN was established in 1975 to meet the communication needs of the Turkish Armed Forces. The main purpose was to meet this need with national means. ASELSAN, affiliated to the Turkish Armed Forces Foundation, is Türkiye's largest company, consisting of communication and information technologies, radar and electronic warfare, electro-optics, unmanned systems, land, sea and weapon systems, air defense and missile systems, and command control. defense electronics company. Apart from these, the company specializes in transportation, security, traffic, automation and medical systems. ASELSAN, with its more than 7,000 employees and highly qualified engineering staff, allocates 7% of the company's annual revenue to research and development activities (Aselsan, 2022). It has foreign affiliates abroad in countries such as Azerbaijan, Kazakhstan, Jordan, UAE and South Africa. The company is working to reduce Türkiye's dependence on foreign defense equipment (Sezgin and Sezgin, 2020, p. 345). According to Defense News Top 100 data, ASELSAN is a domestic product exporter company that invests in international markets and is among the world's top 100 defense companies (DefenseNews, 2021).

Turkish Aerospace Industries (TUSAS TAI)

Turkish Aircraft Industry Company (TUSAŞ) was established on 28 June 1973 under the Ministry of Industry and Technology in order to reduce Türkiye's foreign dependency in the defense industry. With the decision to use F-16 aircraft to meet the fighter aircraft needs of the Turkish Air Force; Turkish Aerospace Industries (TAI) was established in 1984 by TUSAŞ. TAI was incepted as a Turkish-USA joint investment company for 25 years to carry out the manufacture of F-16 aircrafts, integration of on-board systems and flight tests. Before the completion of the 25-year period, the foreign shares of TAI were purchased by Turkish shareholders in 2005 and the company was restructured. In this context, TAI and TUSAŞ have merged under one roof TUSAŞ – Türk Aerospace Industries. This company gradually expanded its activities and became the technology center of Türkiye in the development, modernization, production and system integration processes of aviation and space industry systems. TUSAŞ TAI is among the top hundred global players in the aviation and space industry and develops aircrafts, helicopters, Unmanned Aerial Vehicle (IHA) systems, space systems and national combat aircrafts (TUSAS, 2022).

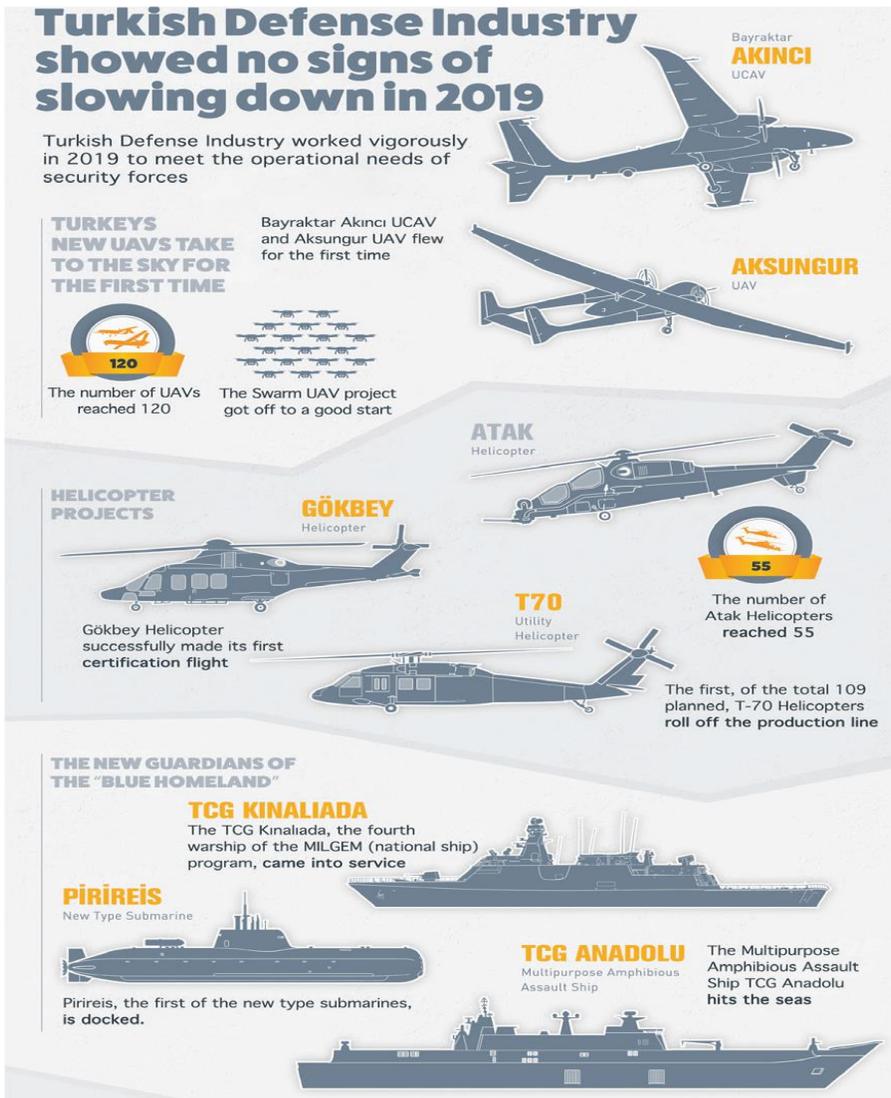
BMC Automotive Industry and Trade Inc.

Founded in 1964, BMC, one of Türkiye's largest commercial and military vehicle manufacturers, has developed commercial and defense industry vehicles in many different configurations such as buses, trucks, mine-resistant armored vehicles, tactical wheeled vehicles, tracked and unmanned land vehicles. BMC has exported to 80

countries with the production of more than 300 thousand vehicles since its establishment and has provided an added value of approximately 10 billion dollars to the Turkish economy. BMC company produces multi-purpose armored vehicles (Kirpi), VURAN Armoured Vehicles and Amazon MRAP (Mine Resistant Ambush Protection), as well as the ALTAY Main Battle Tank, one of the most advanced tanks in the World (BMC, 2022).

BMC became the first private defense industry company in Türkiye to be in the list of Defense News “Top 100 List” at the 85th place in 2018, with \$554.18 million defense revenue. BMC entered the same defense list twice in a row in 2019 and 2020, and achieved an important success for Türkiye (DefenseNews, 2020).

Picture 1: Development of Turkish Defense Industry (I)



Source: Demir, İ. 2020. "Transformation of the Turkish Defense Industry: The Story and Rationale of the Great Rise", *Insight Türkiye*, 22(3): 17-40.

Roketsan

Roketsan was established on 14 June 1988 in order to meet the rocket and missile needs of the Turkish Armed Forces (TSK), and to have a leading institution in the design, development and production of rockets and missiles in TürkiyeG. It has developed advanced and effective products in many fields such as land and air defense systems, naval systems, precision-guided systems, space projects and ballistic protection systems (Roketsan, 2018) (Roketsan, 2022). According to Roketsan Chairman of the Board Faruk YİĞİT, with the development of Roketsan, the localization rate in the Turkish defense industry increased from 37% in 2006 to 65% in 2019. In 2023, this rate is targeted to exceed 75%. Roketsan has produced world-renowned brand systems such as UMTAS

(antitank missile system), OMTAS (Medium Range Anti-Tank Weapon System), HİSAR Air Defense Systems, Laser Guided Missile CİRİT, Stand Off Ammunition SOM with different variants, Mini Smart Ammunition MAM-L and MAM-C, TEBER Laser Guidance Kit, ATMACA Surface-to-Surface Guided Missile, BORA missile and Portable Air Defense System SUNGUR (Yiğit, 2022). Roketsan entered the list of the world's 100 largest defense companies at the 98th place in 2017. It rose to 96th place in 2018, 89th place in 2019 and 91st place in 2020 on the same list. With the increase in the number of companies in the defense industry in the world, it could not enter the list of the 100 largest companies in 2021 (DefenseNews, 2021).

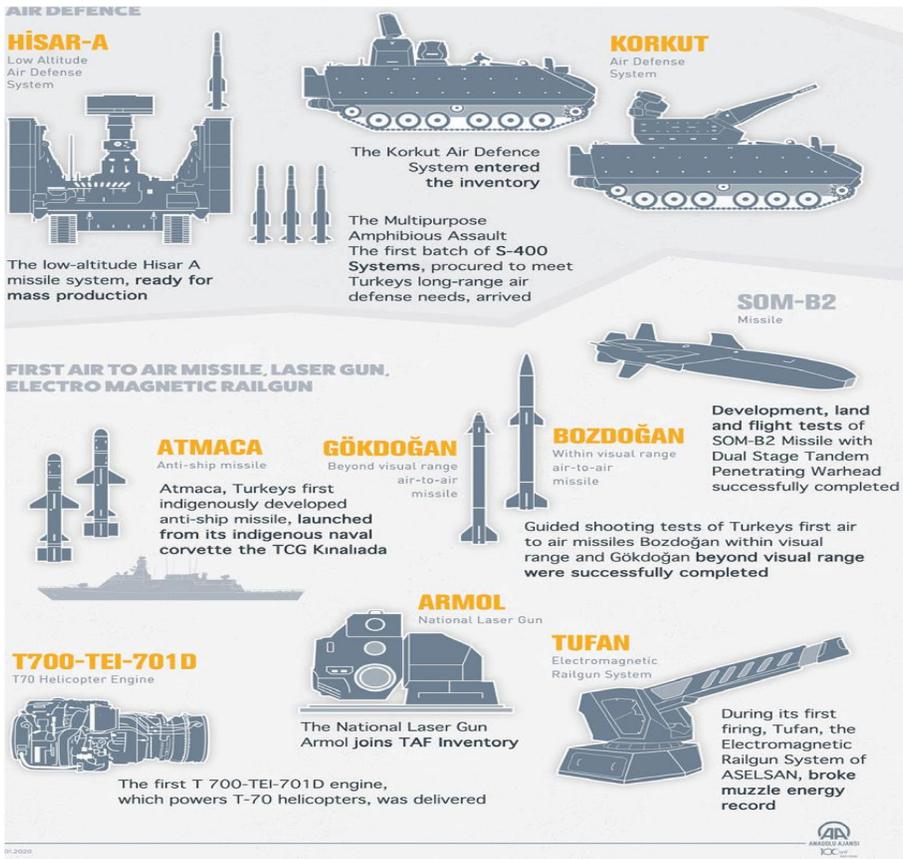
Defense Technologies Engineering and Trade Inc. (STM)

STM was established in 1991 by the decision of the Defense Industry Executive Board. Its main purpose is to provide project management, system engineering, technology transfer, technical and logistic support and consultancy services to the Turkish Armed Forces. The company operates in a wide range of areas such as Unmanned Aerial Vehicle (UAV), military naval platforms, command and control systems, cyber security, radar systems, satellite technologies, certification and consultancy. STM produces solutions for the needs of the public and private sector in Türkiye with the unique and critical systems it has developed using domestic resources. It contributes to the competitiveness of the Turkish defense industry in the global market and displays an export-oriented approach. It is one of Türkiye's largest defense industry companies (STM, 2022). STM, which entered 97th place in 2018, was listed 85th in 2019 and 92nd in 2020. STM could not enter the Global Defense 100 list in 2021 due to the increasing defense budgets in the world and the entry of new companies into the list (DefenseNews, 2021).

STM attaches importance to the development of critical technologies and R&D works.

Autonomous drone systems developed by STM used for kamikaze and surveillance. ALPAGU, popularly known as the kamikaze, is the first domestic fixed-wing intelligent ammunition system. KARGU, rotary wing smart ammunition system, surveillance mini UAV TOGAN and reconnaissance-oriented ALPAGU BLOK II are technological vehicles with powerful features. STM provides superior tactical capabilities for the Turkish Armed Forces to use in counter-terrorism and security operations. STM carries out the construction and modernization tasks and detailed engineering activities for warship platforms. The MilGEM project is at the forefront of these missions, where STM has the opportunity to increase the naval power of the Turkish Armed Forces (Defense Türkiye, 2019, p. 98).

Picture 2: Development of Turkish Defense Industry (II)



Source: Demir, İ. 2020. "Transformation of the Turkish Defense Industry: The Story and Rationale of the Great Rise", *Insight Türkiye*, 22(3): 17-40.

FMC – NUROL Defense Industry Inc. (FNSS)

FNSS company is one of the world's leading companies in the design and manufacture of wheeled and tracked armored combat vehicles, combat engineering vehicles, turrets and sustainability solutions (Defense Turkey, 2019, p. 52). With an agreement between FMC and NUROL in 1986, they took the first steps of the FMC-NUROL Defense Industry (FNSS) joint venture company that they would establish in the future. The company participates in the ZMA tank tender opened by the Presidency of Defense Industries in the same year. After the signing of the signature, the contract's entry into force begins and the ZMA Project officially enters into force on August 15, 1989. FNSS, which was established as Türkiye's first private defense industry company, thus has the opportunity to realize one of the biggest defense projects of the Turkish Armed Forces. FNSS has implemented many projects for the Turkish defense industry since its establishment. These projects include 4x4 and 8x8 tactical wheeled armored vehicles, 15-ton tracked armored vehicles, mobile floating assault bridge, medium-weight tanks, armored fortification construction equipment and manned and unmanned turrets. FNSS's KAPLAN class tracked armored product family and PARS wheeled armored vehicles are preparing to shape the next generation combat vehicle trends into the 21st

century (FNSS, 2022). The company entered the Global Defense 100 list only once in 2020, at the 98th position (DefenseNews, 2020).

Hava Electronics Industry Inc. (HAVELSAN)

HAVELSAN was established in 1982. It is considered as one of the largest technology companies in Türkiye. It is a company that produces technology and offers solutions to its customers in high technology, software, defense, security and informatics sectors. HAVELSAN operates in software-based systems and offers unique products and systems in their fields to both public institutions and organizations, as well as private sector and international customers. It specializes in cyber security solutions, command control and defense technologies, information and communication technologies, and training and simulation technologies (HAVELSAN, 2022).

HAVELSAN entered the Top 100 list for the first time in 2020 and ranked 99th (DefenseNews, 2020). The company has succeeded to be one of the seven Turkish defense companies on the list with its defense income of 295.61 million dollars. According to General Manager of the company Mehmet Akif Nacar, HAVELSAN has been one of the three Turkish companies that achieved an increase in revenue by 6% in 2019 which was 342.27 million dollars in total (Savunma Haber, 2020).

Baykar Technology

In today's world, the defense industry is a fundamental component of the world economy and one of the main factors in the balance of power. Defense expenditures have gradually increased due to the competitor countries' quest to respond to the progress of countries in weapons technologies. Baykar Teknoloji is not yet on the list of the 100 most powerful defense companies. However, this company will be examined in this study due to the reputation, efficiency and wide range of uses (North Africa, Syria, Karabakh, Ukraine) of Turkish unmanned aerial vehicles.

Baykar Makina, established in 1986 under this name has produced Türkiye's first domestic and national Unmanned Aerial Vehicles (Baykar 2022). The most well-known model developed and put into use by Baykar is the Bayraktar TB2 Tactical S/UAV system. Bayraktar TB2 is a Medium Altitude Long Stay (MALE), Tactical Unmanned Aerial Vehicle capable of performing Intelligence, Surveillance and Reconnaissance (ISR) and armed attack missions. The TB2 has proven its effectiveness with over 400,000 operational flight hours. Currently, 257 Bayraktar TB2 platforms are at the service of Türkiye, Qatar, Ukraine and Azerbaijan. Bayraktar TB2 holds the record for endurance (27 hours 3 minutes) and altitude (25,030 feet) in Turkish aviation history for now. Bayraktar TB2 is the first aircraft in its category to be exported abroad (Baykar 2022). Another more powerful and effective project than Bayraktar TB2 is AKINCI UAV. Akıncı UAV will reduce the burden of warplanes and be used for air bombardment. Bayraktar Akıncı UAV system will be equipped with domestically and nationally produced ammunition, missiles and bombs like Mini Smart Munition MAM-L, Mini Smart Munition MAM – C, Cirit Missile, L-UMTAS Missile, Mini Smart Munition Bozok, MK-81, MK-82, MK-83 Guided Bombs (JDAM), Wing Assisted Guided Bomb MK-82, Air-to-Air Missile Gokdogan and Bozdogan, Stand-Off Missile SOM-A (Baykar 2022).

Opportunities and challenges for Turkish foreign policy

The Turkish defense industry, which has made a great leap forward especially since 1985 and has a strong historical background, has assumed a domestic and national identity that can be considered as significant in the global system. More especially, Turkish defense industry aims to provide self-sufficiency by transforming the defense industry in the last ten years by collaborating with government-sourced and private sector investments. The fact that the Turkish unmanned aerial vehicles produced by Baykar Teknoloji, supported by the Turkish government, attract a lot of attention in the international arena (Syria, Libya, Karabakh, Ukraine) is the most concrete proof of this.

However, experts who study Turkish politics have brought different statements for Türkiye's growing defense industry and use of military power. For instance, Patrick Kingsley (2019) argues that the reason of Türkiye's growing defense industry and use of military power is to increase the popularity of the AK Party government in domestic politics. Gurini (2020) reduces this issue to a more personal analysis and claims that expanding and developing Türkiye's both growing defense industry and the domestic arms industry is a personal desire of President Erdoğan. In fact, according to Gurini, this issue is the cornerstone of Erdoğan's assertive foreign policy. On the contrary, Altok and Karşıkaya (2017, p. 153-155) emphasize that growing defense industry and use of military power aims to maintain Türkiye's position in a changing regional order where soft power politics are insufficient. While doing that, the Turkish government takes pragmatism, principles, goals or realpolitic concepts into consideration. Apart from these discussions, there are studies evaluating Türkiye's increasing use of defense industry and military force from an identity perspective (Islamist, neo-Ottoman and nationalist). With reference to Taşpınar (2008), he asserts that Neo-Ottomanism motivates the military and national security establishment of AK Party government.

Despite all the developing and changing conditions, Türkiye does not neglect using diplomacy. While Türkiye does not neglect the use of diplomacy, she also strives to solve perceived regional problems by turning to hard power tactics. Thus, according to Hintz (2020, p. 10), in recent years, Turkish foreign policy has been characterized as unilateral and aggressive. Sakman on the other hand, interprets the developments in the Turkish aviation industry as a facilitator for Türkiye's ambition to become a regional (if not global) power. He further argues that the Turkish Armed Forces (TAF) is involved in many geographies with different missions, and Turkish weapons are exported to many continents. The TAF is fighting terrorists in Syria, sending equipment to Somalia, and patrolling with Nigerian coast guards. While Karabakh has been liberated from Armenia with the help of drones produced by Türkiye, Turkish weapons have also changed the course of the war in Libya (Sakman, 2020, p. 38-39).

Adar (2020, p. 10) consolidates this statement that since 2016, Turkish foreign policy has markedly shifted from soft power policies to a hard power approach appearing at many front-lines. This hard power approach contained military incursions into Northern Syria in 2016, 2018 and 2019. It includes the propagation of Turkish warships to protect drilling activities in Cyprus's Exclusive Economic Zone (EEZ). This approach also implicates both the signing of EEZ and military support agreements with the Libyan Government of National Accord (GNA). Adar further elucidates that Türkiye's new

military bases in the Middle East and North Africa (MENA), including in Qatar, underline this hard power shift. Türkiye aims to build both a political and military sphere of influence in order to realize its foreign policy goals by establishing bases in its close and especially in the far surroundings such as the MENA region (Kasapoğlu, 2017, p. 6).

According to Yeşiltaş, assertive foreign policy has become more and more prominent in the context of the Syrian conflict. The rapid spread of non-state armed groups and the intensification of the Syrian civil war have significantly undermined Türkiye's national security architecture as well as regional security priorities. In particular, the rise of the terrorist organizations PKK and ISIS in Syria and the territorial expansion of the terrorist organization PKK's Syrian arm, the YPG, have created a deep strategic challenge for Türkiye's national security. This challenge forced Türkiye to adopt a more assertive foreign policy and military strategy to prevent the PKK-YPG's territorial and military mobilization (2020, p. 94).

Kutlay and Öniş (2021, p. 1092) draw attention to the connection between the use of hard power and security concerns. Thus, according to them, security concerns are the main driving force of Türkiye's foreign policy. Increasing geopolitical risks also justify the use of hard power. In the last decade, the reflection of military power abroad, together with a strong indigenous defense industry, has become a central target of Turkish foreign policy. In 2020, President Erdoğan stated that in addition to the reflection of military power abroad as a hard power, they succeeded in reducing the foreign technology dependency in the Turkish defense industry from 70 percent to 30 percent. In the last 18 years, the number of indigenous companies operating in the defense industry increased from 56 to 1,500. The export volume of Türkiye in the defense sector increased from 248 million dollars to over 3 billion dollars (Erdoğan, 2020). İsmail Demir, President of Defense Industry, mentioned about the export success of the indigenous defense industry in particular. According to Demir, the projects in 2002 were realized with a budget of approximately \$5.5 billion. After 2020, the project volume reached 60 billion dollars with an increase of approximately 11 times. Looking at the projects that are still in the bidding stage, it is estimated that a figure of over 75 billion dollars will be reached in the near future (Demir, 2020, p. 35).

In parallel with the developments in the indigenous and national arms industry, there are challenges and concerns brought about by the active, assertive and hard power-oriented transformation of Turkish foreign policy in recent years. The first concern has to do with the sustainability of this assertive stance. This power-oriented military stance, which is based on military equipment produced with domestic resources, should not be too costly in economic and political terms. Since there are both private and state institutions in the military defense industry, attention should be paid to institutional reforms and institutionalization (Yeşiltaş, 2020, p. 109). In this respect, Türkiye should create a grand strategy for the planning of the country's long-term strategic goal, which should redefine the roles of civil and military actors in the field of security and defense. Thanks to this strategy, even in the event of a government change in the country, delays in the cancellation and completion of defense projects arising from the changing mentality and approaches towards national defense and security policies will be prevented (Seren, 2021, p. 113-114). Another concern is the presence of

Turkish soldiers in many areas and countries. In addition to being economically costly, military bases to be opened in more than one country where national weapons are used may pose a threat to possible attacks by terrorist groups (Kasapoğlu, 2017, p. 20).

Increasing investment in technology development and self-sufficiency in the defense industry is a major priority for Türkiye. Although this is a promising sign for the defense industry, the issue of imports still remains a major concern. Although Türkiye's foreign dependency in the military defense industry has decreased significantly in the last ten years, imports are mainly based on raw materials. This raises the question whether the increase in exports is largely based on imports. A country like Türkiye that adopts an active and assertive foreign policy may face some defense sanctions when it has a policy conflict with its regional and global neighbors. Sanctions may be inevitable, especially if you do not have 100% indigenous defense resources.

Conclusion

This article has probed the effects of Turkish defense industry's transformation on Turkish foreign policy. Turkish foreign policy has attracted great attention since it started using Turkish origin weapons in its close vicinity. Türkiye has adopted an active and assertive foreign policy by increasing its military presence beyond its borders by exporting locally produced weapons, active operations, military bases and peacekeeping missions. Türkiye's expanding military presence is supported by a growing military industry. Although Türkiye's hard-power strategy seems to have emerged in recent times, her power projection is multidimensional. Active and assertive Turkish foreign policy includes attempts to fortify diplomatic, economic and social ties with neighbors, to become a significant and indispensable part of regional and international organizations and to ensure broad-based development assistance programs that increase the importance of Türkiye's global and regional position.

The growing defense industry allows Türkiye to be less dependent on arms imports and to have more autonomy and maneuverability in her foreign policy. Türkiye's defense industry has exploded in the last ten years. For example, in 2010, Türkiye had only one company on the world's top 100 Global Defense Companies list. Seven Turkish companies entered to the list in the past 12 years. So far, more Turkish companies have been included in this list than Israeli, Russian, Swedish and Japanese companies combined.

Emerging as a new UAV force in the world, Türkiye is becoming more popular in regional security discussion with her Bayraktar TB-2 UAV. TAF is currently using different types of UAVs in different regions beyond the borders of Türkiye. Conflicts in Nagorno-Karabakh and Libya brought invaluable experiences to Turkish defense industry. In these successful operations, the hard power capacity of Turkish foreign policy was confirmed in North Africa and the Caucasus Mountains with the help of Turkish UAVs. Turkish drones have gained a significant reputation after successful operations in Syria, Libya and Karabakh. During Putin's war on Ukraine, it became globally known as the Ukrainian army inflicted great losses on the Russian army by using Turkish drones. Qatar, Hungary, Bulgaria, Serbia, Morocco, Malaysia, Kazakhstan, Uzbekistan, Kyrgyzstan, Pakistan and Saudi Arabia have either bought or are seriously interested in Turkish drones. The deployment of Turkish-made drones in

southeastern Türkiye and northern Iraq has also benefited Türkiye and enabled Ankara government to contain, if not eliminate, the terrorist organization PKK's insurgency.

If there is a new power in the current Turkish foreign policy that can be described as active and assertive, it can be explained as the power from the indigenous military industry. Türkiye has made more investments in indigenous defense industry to decrease its dependence on global powers to hold regional security crises, and has become more flexible and transactionalist in its foreign affairs. The transformation in defense industry has revealed significant opportunities and new collaborations to the future projection of Turkish foreign policy, and has been a bargaining tool for Türkiye's economic and security interests. On the other hand, it has presented challenges like the struggle for perception of aggressiveness in Turkish foreign policy and sustainability of the rivalry in the defense global market.

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