LUISS

Dipartimento di Scienze Politiche

Cattedra di Relazioni Internazionali

Arming the nation: Türkiye's drone industry between ambitions and realities

Prof. Raffaele Marchetti
RELATORE

Costanza Emanuele (100062)
CANDIDATA

Anno accademico*: 2023-2024*

Abstract

This thesis examines the dynamic relationship between UAV exports and foreign policy in Türkiye. Central to this research is the question: How do drones' exports influence foreign policy decisions, and how can they be leveraged to fulfil a nation's ambitions? Türkiye serves as a compelling case study due to its significant role in contemporary geopolitical landscapes and its emergence as a middle power with a notable presence in the UAV market. To address this research question, an in-depth analysis of Türkiye's UAV industry, including the advancements and strategic shifts by key players like Baykar, is undertaken. Two case studies highlight the strategic deployment of Turkish drones in foreign policy, illustrating their impact on the international power struggle. This study not only sheds light on Türkiye's innovative use of UAVs in diplomacy but also underscores the broader implications for middle powers navigating a complex global order.

Table of contents

List of figures:

List of tables:

List of graphs:

Introduction

In the first weeks after the start of the Russian invasion of Ukraine, Turkish Unmanned Aerial Vehicle (UAVs) Bayraktar TB2 demonstrated unexpected effectiveness against Russian forces and since then, their employment has raised increasing interest in many observers. This event has been a turning point for Türkiye, a middle power nation. The case of Türkiye contributes to the trend of emerging middle powers becoming influent in regional disputes in a changing international order. Turkish foreign policy has evolved significantly over time, shaped by internal dynamics and the broader international distribution of power. Currently, Türkiye finds itself in a rediscovered position of influence, leveraging its unique geographical and cultural position as a bridge between the West and the Middle East. Its historical and institutional ties to Europe and the United States intersect with its cultural and religious connections to the Middle Eastern region, creating a combination of opportunities and constraints. This position is being strategically utilized by Türkiye to enhance its influence and position in global affairs through various policies, including its UAV strategy. The aim of this thesis is to explores how Türkiye leverages its growing UAV capabilities to enhance its international stance. To explain this the broader implications of Turkish UAV exports on the country's foreign policy are explored and a focus on the balance of power and strategic influence Türkiye gains through its defence industry advancements will be provided.

The analysis is structured into three chapters. While the first chapter provides a conceptual framework and a set of key definitions necessary for undertaking the research, the second chapter examines Türkiye's historical foreign policy trajectory, geopolitical position, the development of its defence industry, and the specific progress in the UAV sector, using Libya and Nagorno Karabakh as case studies. Lastly, the third chapter presents a detailed analysis of the Turkish UAV market, assessing whether UAVs can truly be considered a source of power. It includes an evaluation of various academic perspectives and data from the SIPRI arms transfer database and the Defence and Aerospace Industry Manufacturers Association (SaSaD) annual reports.

This thesis has yielded different conclusions on the impact of drones and foreign policy. A first notable finding is that as Turkish UAVs' exports increased, imports of

strategic assets for their production decreased. Some data and discourse evidence has shown that the Turkish defence industry was able to implement the production of strategic assets, as sensors and engines, for the production of drones, in turn increasing their level of indigeneity. Secondly, through a more detailed analysis of Turkish role in Ukraine and Africa, the thesis demonstrates how drones are, although one of many, a valuable variable, strategic for their visibility and capacity of gaining international attention, therefore enhancing the role of Türkiye in international scenarios. Taken together, it is concluded that the strategic use of drones done by Türkiye in the recent years has played a relevant role in changing Turkish position in the international system and in fostering its geopolitical ambitions.

This thesis contributes to the scholarship on the interplay between military technology and foreign policy, offering insights into how emerging powers like Türkiye utilize advanced defence capabilities to bolster their global standing. The relevance of this appears to be extremely significant in a moment defined by many scholars as a transition from the liberal international order, established under the American dominance, to a different one characterized by the emergence of new powers. The following questions inform this research: How does an emerging middle power perform in moments of redefinition of power? What can a young arms industry do to compete in niche and competitive markets? Why and how Türkiye is benefiting from its UAV exports? How's Erdoğan's leadership leveraging on them for its global and domestic ambitions?

CHAPTER ONE

A Conceptual Framework: Middle Powers and UAVs

1.1 Introduction

The first chapter of this research will review the scholarly literature available on the industrial development and export of Unmanned Aerial Vehicles' (UAV) and their correlation with foreign policy impact, particularly focusing on Türkiye. To better comprehend this, we start by introducing the concept of middle power, the debates that are around it and how countries that are classifiable as middle powers act in moments of power redistribution, which we argue is what characterizes today's world. Middle powers are often defined as states that exert influence within and beyond their immediate region without possessing superpower status, and which play a crucial role in shaping global dynamics through diplomatic, economic, and military means.[1] The difference between established and emerging middle powers will be highlighted, defining their characteristics and the Turkish case.

After this, an introduction on the concept of arms export and its relation with foreign policy decisions will be made, outlining the literature pertaining to the correlation between arms export and policies directed to increase the country's power. Subsequently, we will focus on the central theme of interest: drones, their characteristics, alleged revolution, and the wide debate they created in the academia. A brief introduction on Unmanned Aerial Vehicles' (UAV) development will follow. Finally, we will go through the scholarly research done, trying to describe the context in which this paper exists and the gap it tries to fill.

1.2 Middle power activism

The study of middle powers in international relations has evolved significantly over time, starting in the late 20th century. Initially, scholarly attention was predominantly directed towards understanding the dynamics among great powers, overlooking the roles and significance of middle and small powers. However, with the aftermath of the Second World War and the emergence of numerous states in Asia and Africa, a gradual shift occurred towards acknowledging the relevance of smaller states in global affairs. It was not until the 1970s that substantive publications and studies began to emerge, shedding light on the unique characteristics and roles of the middle powers. Carsten Holbraad, one

[1] Holbraad, C. (1971). The role of middle powers. *Cooperation and Conflict*, 6(2), 77-90

of the early scholars who delved into the topic, in one of his works[2] defined middle powers as follows:

> *"'Middle' has been used to denote both an intermediate place in the power hierarchy of States and either a central situation in geography or a medial position in some antagonism. (Holbraad 1971)"*

This definition contains two essential dimensions: relative power status among states and geographic positioning. The former determines what strategies the countries will choose for their external relations, which will furthermore change depending on the structure of the system (multipolarity, unipolarity, bipolarity) and on the domestic perception of it. The latter allows to reflect on the domestic ambitions and the perceptions of threats and possibilities dependent on the regional and global landscape. Another theory on middle powers' essential features is given by Nazlı Bakır, who affirms that one of the most relevant characteristics a middle power has is relative material power capabilities, which is the reason why great powers perceive middle powers as strategically important.[3]

In the current international system, middle powers can be distinguished between established and emerging powers. The established middle powers are countries such as Canada and Australia that have been in this position for a long time and have usually cooperated in, promoted, and facilitated the building of the international liberal order.[4]

On the other hand, emerging middle powers, such as Türkiye or Indonesia, are more prone to multilateralism to stabilise their position, serve as a role model, especially in their region, and have a proactive foreign policy.[5]

The prevailing body of scholarly research often positions Türkiye as an emerging middle power. Despite its prominent role in global affairs and regional dynamics, Türkiye classification as an emerging middle power distinguishes it from traditional middle powers such as Australia and Canada. Numerous studies emphasize defining characteristics that contribute to Türkiye's status as an emerging middle power, including

---

[2] Holbraad, C. (1971): cit.
[3] Bakir, N. (2022). Aspiration and Activism: Middle Power Behavior During International Power Shifts.
[4] Cooper, A. F., Higgott, R. A., & Nossal, K. R. (1993). Relocating middle powers: Australia and Canada in a changing world order (Vol. 6). *Ubc Press*.
[5] Öniş, Z., & Kutlay, M. (2017). The dynamics of emerging middle-power influence in regional and global governance: the paradoxical case of Turkey. *Australian Journal of International Affairs*, 71(2), 164-183.

its evolving democratic landscape, burgeoning economy, and increasing influence within regional contexts.[6] The difference between traditional and emerging middle power has also been analysed based on their behaviours in global affairs: while the traditional powers like Canada and Australia act as a "good citizen" of the established order, emerging middle powers, like Türkiye, Mexico or Indonesia, are more critical towards the system.[7] What is crucial for emerging middle powers is that they are developing in period that many scholars see as a transitioning moment, where the international liberal order and its hegemon are increasingly contested and competed by emerging great powers.

The current distribution of power and the theory of a rising new order is widely debated within the academic circles. Many scholars maintain the view of the United States as a hegemonic power, emphasising the unchallenged dominance in international affairs and the lack of revisionism in the policies and strategies of the perceived contenders, notably China and Russia.[8]

Conversely, an alternative perspective within scholarly literature characterizes the contemporary order as a transitional phase, characterized by hybridity.[9] This framework juxtaposes the established Western powers with the ascending non-Western powers, which assume increasingly assertive and counter-hegemonic roles on the global stage. Some studies have also reflected on the implications of multipolarity in the dominant international organization, delving into the role of China as an economic superpower.[10]

In this research this debate is acknowledged, but, for the purpose of our analysis, we consider the current system in transition, with an established past-order, regional and global emerging superpowers, and middle powers with more incentives to join a critical stand towards the established order. By situating the analysis within this transitional framework, the aim is to provide insights into the shifting dynamics of global power

---

[6] Jordaan, E. (2003). The concept of a middle power in international relations: distinguishing between emerging and traditional middle powers. *Politikon*, *30*(1), 165-181

[7] Öniş, Z., & Kutlay, M. (2017), p. 164-166

[8] Brooks, S. G., & Wohlforth, W. C. (2023). The Myth of Multipolarity: American Power's Staying Power. *Foreign Aff.*, *102*, 76; Ikenberry, G. J. (2014). The illusion of geopolitics: The enduring power of the liberal order. *Foreign Aff.*, *93*, 80

[9] Öniş, Z., & Kutlay, M. (2020). The new age of hybridity and clash of norms: China, BRICS, and challenges of global governance in a postliberal international order. Alternatives, 45(3), 123-142

[10] Wade, R. H. (2011). Emerging world order? From multipolarity to multilateralism in the G20, the World Bank, and the IMF. *Politics & society*, *39*(3), 347-378

structures and their effects on regional and international actors. This perspective allows to contextualize Türkiye's foreign policy in relation to the broader transformations shaping contemporary geopolitics, such as the rise of Chinese power in competition with the established US hegemony, and the upsurgence of other influential players, especially middle powers in regional disputes. The importance of the distribution of power has been analysed by Oğuzlu and Han, who suggest that in a bipolar world, small and middle powers are attracted to the competition and requested to align with one of the two sides, becoming substantially dependent on the decisions of great powers.[11] In a multipolar world, comparable to the current transitional framework we built, however, middle powers have more freedom in decision making and usually engage in "multidirectional and multidimensional policies", seeking influence and power, especially in their region.[12]

Türkiye is widely considered an emerging middle power, and while it shares many characteristics with other middle powers, it has its own peculiarities. Going back to Holbraad's definition[13], Türkiye holds a unique geographical role that has always characterised its policy making, being the connection between Europe and the East, by the western powers and the Middle East.[14] Geographical position, other than opportunities, has created many threats. On the Western border, the disputed islands in the Aegean constitutes a decade's long legal dispute on the maritime borders with Greece, anchored to historical problems of security and sovereignty that appear to have no commonly agreed solution. Additionally, the Cyprus issue has brought issues to Türkiye, who has always defended and acted proactively to assure independence for the Turkish Cypriots in the northern part of the island, also affecting its relations with the whole international community. On the Eastern border Türkiye finds itself the neighbour of five unstable countries: Syria, Iran, Iraq, Armenia, and Georgia. Stability in the region has been an issue since the late 1980s, and the strategies of the great and middle powers have changed over time.

---

[11] Oğuzlu, T., & Han, A. K. (2023). Making Sense of Turkey's Foreign Policy from the Perspective of Neorealism. *Uluslararası İlişkiler Dergisi*, 1-19.
[12] Edström, H., & Westberg, J. (2020). The defense strategies of middle powers: Competing for security, influence and status in an era of unipolar demise. *Comparative Strategy*, *39*(2), 171-190
[13] Holbraad C. (1971): cit
[14] De Ruvo, G. (2023). La gloria secondo il turco: anima nomade e distruttiva. *LIMES: Il Gran Turco*, 7

The Global Financial Crisis of 2007–2008 marked a turning point in global relations and the distribution of power ushering in the age of hybridity, with the ascendancy of the Beijing consensus, which began to question the prevailing international liberal order and deteriorated the established hegemony of the United States of America and its European allies.[15] Global changes reverberated in countries such as Türkiye, where Western influence was not entirely embraced and coexisted with eastern influences.[16] The interplay of Western and non-Western cultures positioned Türkiye in a unique middle ground on the international stage, significantly shaping its foreign and economic policies. From 2008, but more significantly from 2015 onwards, Türkiye has adopted a more assertive and active foreign policy, constituting what many scholars refer to as unusual middle power activism.[17]

After 2008, Türkiye maintained its alignment with Western values and *modus operandi* in its regional policies.[18] From 2015, with a renewed interest of major powers in the Middle East[19], its foreign policy changed yet again, adopting a more aggressive and security driven behaviour. One example of this renewed activism can be found in the intervention in Syria in 2020, where the Turkish government launched, as a consequence of an attack on Turkish soldiers on the territory, the operation "Spring Shield", a combination of drone warfare and artillery against the Syrian army.[20]

The pertinence of investigating middle power activism in the context of Türkiye's drone exports cannot be overstated. The nature of the Turkish government's foreign policy activism, as it has developed under President Erdoğan's administration, departs from traditional European diplomatic engagement, consisting in policies involving soft power and diplomatic tools rather than military tools, which was taken as a model up until

[15] Öniş, Z., & Kutlay, M. (2020): cit
[16] Oğuzlu, H. T. (2016). Turkish foreign policy at the nexus of changing international and regional dynamics. *Turkish Studies*, *17*(1), 58-67
[17] Soyaltin-Colella, D., & Demiryol, T. (2023). Unusual middle power activism and regime survival: Turkey's drone warfare and its regime-boosting effects. *Third World Quarterly, 44(4*), 724-743
[18] Kutlay, M., & Öniş, Z. (2021). Understanding oscillations in Turkish foreign policy: pathways to unusual middle power activism. *Third World Quarterly*, *42*(12), 3051-3069
[19] Oğuzlu T. & Han A. K (2023): cit
[20] Rossiter, A., & Cannon, B. J. (2022). Turkey's rise as a drone power: trial by fire. *Defense & Security Analysis, 38(2)*, 210-229.

2015[21], and increasingly incorporates the strategic use of military capabilities.[22] This shift toward leveraging arms exports, both for their inherent power and their indirect influence, necessitates analysis. Understanding the fluidity of emerging middle powers within the international realm is crucial to delineating the scope of this research. Our investigation delves into the interplay between arms exports and foreign policy, a dynamic that is deeply intertwined with both structural international factors and domestic political considerations, each shaping the evolution of national foreign policy strategies. As we analyse the structural composition and policy ramifications of drone technology, the prevailing international (dis)order is acknowledged as an influential framework against which Türkiye calibrates its approach in accordance with domestic imperatives and international aspirations. Thus, this introductory analysis has laid the groundwork for a nuanced exploration of how the changing power dynamics in international relations influence the strategic choices of middle powers.[23]

1.3 Drones and the power of arms export

To continue with the contextualization of our analysis we believe is essential to understand the relevance of arms export and the recently developed interest in drones' export. The use of arms transfer for foreign policy aims has not always been a popular tool: historically, those state that achieved technological and wealth superiority maintained a higher position in the global hierarchy. [24] This superiority, however, was not intangible, with the increase of use of the co-production system and with the establishment of indigenous arms industries in developing countries, scholars started to reflect on the power that arms export could bring to emerging powers, and the effects on Western countries which, up until that point, were the main producers and providers of advanced armaments.[25]

---

[21] Kasapoğlu, C. (2020). Turkey's Burgeoning Defense Technological and Industrial Base and Expeditionary Military Policy. *Insight Turkey, 22(3),* 115-130.
[22] International Crisis Group (December 20 2023). "Türkiye's Growing Drone Exports"
[23] Bakir, N. (2022): cit
[24] Çiftçi, A. B. (2022). Using interstate arms sales as a foreign policy instrument (Master's thesis, Middle East Technical University).
[25] Pierre, A. J. (1982). The Global Politics of Arms Sales. *Princeton: Princeton University Press*

As Andrew J. Pierre stated in 1981, "Arms sales are far more than an economic occurrence, a military relationship, or an arms control challenge – arms sales are foreign policy writ large". [26] The implications of arms export on foreign policy have been largely discussed, focusing on the economic consequences[27] and on the increase of influence[28], or dependency, countries experience from arms market's dynamics.[29] A more recent study done by Andrew Hull, David Markov, Steven Zaloga and Christopher Fossanalyses how the market dynamics have been changing from the collapse of the Soviet Union and have evolved with a growing importance of arms exhibitions, diversification of defence product sources, and impact of technology transfer on arms sales.[30]

In recent years wide interest has developed towards Unmanned Aerial Vehicles (UAVs), also known as drones, and their impact in modern warfare.[31] The modern drones' technology has started developing during the First World War, but it's not until the Vietnam war (1955-1975) that an extensive use of drones has been witnessed.[32] Initially, UAVs were used for reconnaissance operations, indispensable for gathering intelligence and surveillance information. With the technological advancements, UAV capabilities evolved significantly, developing vehicles equipped with offensive systems designed to execute lethal military strikes from remote locations.[33]

---

[26] Pierre, A. J. (1981). Arms sales: the new diplomacy. *Foreign Affairs, 60(2),* 266-286.
[27] Smith, R., Humm, A., & Fontanel, J. (1985). The Economics of Exporting Arms. *Journal of Peace Research, 22(3),* 239-247.
[28] Chen, X., Zhao, R. L., Zhang, Z. K., & Zhao, J. (2016). Network-based study on the relationship between arms exports and foreign policies. *Physica A: Statistical Mechanics and Its Applications*, *444*, 194-204
[29] Willardson, S. L. (2013). *Under the influence Of arms: the foreign policy causes and consequences of arms transfers*. The University of Iowa
[30] Hull, A. W., Markov, D. R., Zaloga, S. J., & Foss, C. F. (2017). Changing International Arms Market: Implications for the Department of Defense (p. 0254).
[31] Mayer, M. (2015). The new killer drones: Understanding the strategic implications of next-generation unmanned combat aerial vehicles. *International Affairs*, *91*(4), 765-780
[32] Keane, J. F., & Carr, S. S. (2013). A brief history of early unmanned aircraft. *Johns Hopkins APL technical digest*, *32*(3), 558-571
[33] Wagner, W., & Sloan, W. P. (1992). *Fireflies and Other UAV's (unmanned Aerial Vehicles)*. Aerofax

Drones have been widely considered revolutionary in their apport to warfare[34], emphasising their low cost, which makes them more accessible[35], and raising concerns about their ethical use.[36] Other studies, on the contrary, have analysed how the narrative around drones' revolution has been lacking some empirical analysis. In their research, Calcara, A. Gilli, M. Gilli, Marchetti and Zaccagnini provide detailed analysis of three pivotal conflicts where drones were employed, namely the Western military campaign in Libya between 2019 and 2020, the Syrian civil war from 2011 to 2020 and the Nagorno-Karabakh conflict between Azerbaijan and Armenia in 2020.[37] Through the research they underlined how drones have failed to prove their innovative apport to warfare levelling power imbalances, creating offensive advantage, or eliminating close combat. These scholarly works are necessary to emphasize the interest that UAVs are generating and the rich debate that's been producing on the subject and its subfields.

Of particular relevance to this research is the analysis of the correlation between UAV technology and export rates. Export rates are found to be pivotal in the definition of power, especially when referred to the defence market. Export of arms and technology leads to dependency relations from the importer to the exporter, therefore the latter increasing its influence on the country and the region. Arms exports are also important to define a country's partnership and international standpoint. Acquiring from one country rather than another is a clear signal of choosing a preferable partner for economic, political or cultural reasons, and can lead sometimes to hard relations with the other part.

While Türkiye's case has been deemed exceptional in some contexts, the study of its success in exporting indigenous drones in recent years serves as a testimony on the

---

[34] Hwang, W. J., & Song, S. H. (2022). The extension of Turkish influence and the use of drones. *Comparative Strategy, 41(5),* 439-458; Kreps, S., & Zenko, M. (2014). The next drone wars; preparing for proliferation. *Foreign Aff., 93*, 68; Fukuyama, F. (2021). Droning on in the Middle East. *American Purpose, 5;* Mirza, M. N., Qaisrani, I. H., Ali, L. A., & Ali Naqvi, A. (2016). Unmanned Aerial Vehicles: A Revolution in the Making. *South Asia Studies, 31(2*), 243-25

[35] Plaw, A., & Fricker, M. S. (2012). Tracking the predators: Evaluating the US drone campaign in Pakistan. *International Studies Perspectives, 13(4),* 344-365; Marson, J., & Forrest, B. (2021). Armed low-cost drones, made by turkey, reshape battlefields and geopolitics. *Wall Street Journal*, 3.

[36] Brunstetter, D., & Braun, M. (2011). The implications of drones on the just war tradition. *Ethics & International Affairs, 25(3*), 337-358; West, J. P., & Bowman, J. S. (2016). The domestic use of drones: An ethical analysis of surveillance issues*. Public Administration Review, 76(4),* 649-659.

[37] Calcara, A., Gilli, A., Gilli, M., Marchetti, R., & Zaccagnini, I. (2022). Why drones have not revolutionized war: The enduring hider-finder competition in air warfare. *International Security, 46(4*), 130-171.

strategic power they afford to exporting nations. [38] The remarkable progress achieved by Turkish UAVs lie in their accessibility for less powerful countries, due to their low cost and demonstrated efficiency in field operations.[39] Notably, drones produced by the Baykar, the Turkish UAV company, such as the Bayraktar TB2 model, have garnered exceptional international recognition and witnessed a surge in demand, therefore boosting their production.[40] However, due to the reliance Turkish companies had on imports of engines from other countries, an increase in the production led to a consequential increase in these imports, creating substantial dependency from those countries.[41]

What has also influenced arms' market has been the transformation of arms' production systems. Co-production and partnerships with other states have been the primary strategies pursued by small and medium countries to gain a higher level of sophistication in their military industry capabilities.[42] One important example is the partnership established between Türkiye, specifically its most famous UAVs' producer company Baykar, and Ukraine for the production of TB2 drones.[43]

Defence autarchy, which means no dependence in arms production and procurement, has been on the goal lists of many states, of which Türkiye is a long-term example. Although widely pursued, several studies has shown that the difficulties and economic efforts of achieving it are too high and it's likely for these countries to end up joining global production chains and giving up on autarchy dreams.[44] On Turkish case, some scholars have pointed out at the achievements the defence industry has managed to pursue in the last years[45], with a focus especially on drones and companies like Baykar, of which

---

[38] Hüsnü, Ö. (2021). The Foundation and Development of Turkey's Defense Industry in the Context of National Security Strategy. *PERCEPTIONS: Journal of International Affairs, 26(2*), 216-240; Kutlay, M., & Öniş, Z. (2021)

[39] Witt, S. (2022). The Turkish drone that changed the nature of warfare. *The New Yorker*, 9.

[40] International Crisis Group (December 20 2023)

[41] Bağcı, H., & Kurç, Ç. (2017). Turkey's strategic choice: buy or make weapons?. *Defence Studies*, *17*(1), 38-62

[42] Kurç, Ç. (2017). Between defence autarky and dependency: the dynamics of Turkish defence industrialization. *Defence Studies*, *17*(3), 260-281

[43] Bekdil, B. E. (February 4 2022). Turkey and Ukraine to coproduce TB2 drones. *Defense news*

[44] Struys, W., 2004. The future of the defence firm in small and medium countries. *Defence and peace economics*, 15 (6), 551–564

[45] Bilgen, H. (2010). Competitiveness of defense industry in turkey. *International Journal of Economics and Finance Studies*, *2*(1), 63-70; Hwang, W. J., & Song, S. H. (2022): cit; Béraud-Sudreau, L., Da Silva, D. L., Kuimova, A., & Wezeman, P. D. (2020). SIPRI Insights on Peace and Security-EMERGING SUPPLIERS IN THE GLOBAL ARMS TRADE.

drones are highly requested and have been used in several scenarios.[46] Other scholars, however, have stressed the considerable reliance Turkish companies, and their products, have on imports from foreign countries, creating a wide gap between the government narrative and the industry reality.[47] A relevant analysis has been made by Çağlar Kurç in 2023, where he emphasized the driving forces behind Turkish arms exports, specifically in Africa, to increase its influence in the region while simultaneously trying to provide support for its national economy, currently in a severe financial crisis.[48]

1.4 Positioning in the scholarly research

This study aims to analyse the relation between the increase of exports of the UAV technology and foreign policy choices in Türkiye. The middle power activism analysed previously aimed to create a structural framework in which contextualize Turkish foreign policy decisions. Some relevant studies helped create a framework for understanding how emerging middle powers tend to behave in different international power distributions and how it can affect their decisions and perceptions.[49] Many research have already analysed the influence that the international structure has on foreign policy[50], or how threats are perceived in different global relations sets.[51] What we want to dive deeper is the role drones' international demand has on the decision-making process in foreign affairs. In doing so, we take the current international structure as a limit and opportunities setter, characterized by the recent decline in the hegemon position held by the United States and the emergence of other powers, like China, which some see as a possible new player in a bipolar order, or India and Brazil, which might set the stage for a multipolarity. The ongoing situation of transition, still debated by many scholars, creates more opportunities for middle powers to seek influence over other countries, especially in their regional

[46] Urcosta, R. B. (2021). Turkish Drone Doctrine and Theaters of War in the Greater Middle East. *Small Wars Journal*.
[47] Mevlutoglu, A. (2017). Commentary on Assessing the Turkish defense industry: structural issues and major challenges. *Defence Studies*, *17*(3), 282-294; Kurc, C., & Sazak, S. C. (2017). Turkey's Potemkin Defense Industry. *Defense One, 11*, 2018; Bağcı, H., & Kurç, Ç. (2017): cit; Kurç, Ç. (2017): cit
[48] Kurç, Ç. (2023). No Strings Attached: Understanding Turkey's Arms Exports to Africa. *Journal of Balkan and Near Eastern Studies*, 1-18
[49] Cooper, A. F., Higgott, R. A., & Nossal, K. R.(1993): cit
[50] Oğuzlu T. & Han A. K (2023): cit
[51] Kasapoğlu, C. (2020): cit

contexts.[52] To this, the shift of interest shown by the United States to the Middle East to and the Indo Pacific region[53] has enabled the increase in the ambitions of middle powers, like Türkiye, in their near region and beyond.

In addition, we provided an introduction on the development of armaments literature[54] and on the current debates around UAVs, the concerns[55] and doubts[56] they generated in the academia. While the Turkish case can be seen as a successful example of indigenous drones' popularity in foreign countries, with positive implication for the country's reputation[57], a deeper analysis is necessary on the consequences these exports may have, specifically considering the reliance on imports Turkish defence industry still holds and the issues it might create to Turkish affairs.[58] The goal set in the Eleventh Development Plan of 2019-2023 by the Turkish government, consisting in achieving defence autarchy by 2023, has not been completely reached. Turkish UAVs are still reliant on imports of strategic assets, essential for their functioning, and contrasting opinion around the efficiency and achievements of the military industry are being debated between scholars.[59]

Some studies have discussed the unusual nature of middle power activism pursued by Türkiye in the recent years in a "two-level theory" framework, underlying the gap between expectations and capabilities and the correlation with the domestic level pursuit and consolidation of power. [60] In the application of the "two-level theory" formulated by Putnam domestic policies and foreign policy are linked and essential to understand one another. [61] This framework enables us to investigate inside the linkages between foreign

[52] Brooks, S. G., (2023): cit; Öniş, Z., & Kutlay, M. (2020): cit
[53] Jain, P. (2018). The emerging significance of Indo-Pacific: Japan, China, US and the regional power shift. *East Asian Policy, 10(04),* 24-36.
[54] Pierre, A. J. (1981): cit;
[55] Brunstetter, D. and Braun, M. (2011): cit; Plaw, A. and Fricker, M. S. (2012): cit; West, J. P. and Bowman, J. S., (2016): cit; Marson, J. and Forrest, B. (2021): cit
[56] Calcara, A. Gilli, M. Gilli, Marchetti and Zaccagnini (2022): cit
[57] Hüsnü, O. (2021): cit
[58] Bağcı, H. and Kurç, Ç. (2017): cit
[59] Bilgen, H. (2010): cit; Hwang, W. J., & Song, S. H. (2022): cit; Kurç, Ç. (2023): cit; Bağcı, H. and Kurç, Ç. (2017): cit;
[60] Bağcı, H. and Kurç, Ç. (2017): cit; Kutlay, M. and Öniş, Z. (2021): cit; Rossiter and Cannon (2022): cit
[61] Putnam, R. D. (2017). Diplomacy and domestic politics: the logic of two-level games. In *International organization* (pp. 437-470). Routledge

policy changes and drones' industry development, assessing that the latter influenced, to certain level, the second.

In conclusion, this study aims to analyse the relationship between the increase in exports of UAV technology and Türkiye's foreign policy choices. In the next chapter an historical overview will be provided on Turkish foreign policy and its defence industry development, to create a comprehensive framework in which structure our analysis in the last chapter.

CHAPTER TWO

Intersecting Paths: an historical overview of Foreign Policy and Defence

2.1 Research design explanation

In this research, the aim is to explore the correlation between arms exports and foreign policy. The Turkish case stands out as particularly intriguing in contemporary times, given Türkiye's status as an emerging middle power with significant ambitions and capabilities that have become evident in recent years. Before elaborating on the methods of analysis, it is necessary to define what will be the variables of the study and their respective definitions. Arms exports and foreign policy are considered as the two main pillars of this research

When referring to arms exports, it is specifically denoted the sale of arms that are entirely, or predominantly, produced in a particular country, and which have achieved a notable market demand for their cost-effectiveness, efficiency, and impact. Taking the example of Turkish drones, which will be analyse further in the subsequent paragraphs, from 2020 onwards the country has been able to ensure high-quality performance with nearly indigenous Unmanned Aerial Vehicles (UAVs), at first manufactured primarily by the company Baykar, which now cooperates with other major defence industry firms of the country like ROKETSAN[62] and ASELSAN.[63] The Baykar drones, however, are not entirely made-in-Türkiye, as they rely on imports of significant components. This reliance on imports has raised concerns regarding the true autonomy and strategic prowess of these drones.[64] In our analysis, we will initially focus on examining this dependency on imports and its implications for the industry.

The dependent variable we will consider is Turkish foreign policy. While we acknowledge the relevance of the structure of the international system, as well as the numerous factors that can determine the foreign policy of a country, we believe that a sudden success like that experienced by Türkiye for its drones, holds a considerable influence over its foreign policy. For this reason, by analysing the sales and deals done by some representative Turkish drones' company, predominantly Baykar, we'll explain

---

[62] Baykar Makina, (23 April 2021). Turkey's akinci ucav successfully hits targets with roketsan munitions. Available at: https://www.baykartech.com/tr/press/turkeys-akinci-ucav-successfully-hits-targets-with/

[63] Baykar Makina, (25 May 2023). Türkiye's Baykar inks deal to replace embargoed drone electro-optic systems. Available at: https://baykartech.com/tr/press/turkiyes-baykar-inks-deal-to-replace-embargoed-drone-electro-optic-systems/

[64] Bağcı, H., & Kurç, Ç. (2017). Turkey's strategic choice: buy or make weapons? *Defence Studies*, *17*(1), 38-62

Turkish role and objectives in global affairs and its use of drones as a leverage to pursue its broader ambitions. The strategy used in the case studies that will be considered, is defined as "drone diplomacy". Drone diplomacy has been used in different scenarios and in different ways: while in Libya and Nagorno-Karabakh drones have maintained mainly their military scope and advantage, this thesis argues that in Ukraine and Africa a broader strategic use of drones has been made to pursue Türkiye's interests. The choice of analysing Baykar as main representative company of this success is backed by its extraordinary increase of export rates, which reached a level of 99.3% in 2022, its representativeness of Turkish capabilities, also considering the connection with other top Turkish arms company and with the government, and its fundamental and strategic role in many modern conflicts, above all in the one in Ukraine.[65]

The projections of Turkish arms export have significantly changed from 2020 onwards, getting closer to the goal of defence autarchy[66] and achieving outstanding performances on the battlefield.[67] Turkish drones, particularly the Bayraktar TB2, have emerged as key players in numerous conflicts and have garnered widespread interest from various countries. From Türkiye's operations in Syria to the war in Libya in 2020, the conflict in Nagorno-Karabakh resulting in the 2020 war between Azerbaijan and Armenia, and the ongoing conflict in Ukraine, the common ground has been the role Türkiye has been able to play thanks to the utilization of its indigenous drones. The analysis of these cases holds considerable relevance in comprehending contemporary dynamics. Firstly, Turkish drones, as we will analyse in the following paragraphs, exhibit great potential and have demonstrated high performance in the field. However, they do not currently hold the top positions in the global rankings of drone technology, which are still dominated by the USA, Israel, UK, and China technologies.[68] Despite this, Turkish drones, particularly the TB2 model, have achieved notable efficiency ratings and success on the world stage. To explain the increase in their demand is necessary to look also at

[65] Baykar (22/12/2023). Türkiye's new combat drone completes endurance flight test. Available at: https://baykartech.com/en/press
[66] Hwang, W., & Song, S., (2022). The extension of Turkish influence and the use of drones, *Comparative Strategy*, 41:5, p. 450
[67] Ibidem, p. 451
[68] Rasheed, Z. (24 January 2023). How China became the world's leading exporter of combat drones. *Aljazeera*. Available at:https://www.aljazeera.com/news/2023/1/24/how-china-became-the-worlds-leading-exporter-of-combat-drones

their relatively low cost. While Turkish drones may not necessarily excel in all aspects[69], their competitive price has proven to be of significant advantage in the global market[70], along with the efficient publicizing campaign done by the company.[71] The significant success and impact achieved by both the country and the company have paved the way for an expansion of Turkish ambitions in international relations and an increase in its influence on the global stage.

While the validity of this assumption will be analysed and attempted to verified, it's reasonable to posit that the role Türkiye has in the Russia-Ukraine conflict would not have been as significant without the presence of Bayraktar TB2 drones on the battlefield, due to the coproduction deal the company made with Ukraine armed forces in 2019[72], and the previous success and international demand of drones manufactured by Baykar.

This chapter aims to account for changes and dynamics in Turkish foreign policy to provide a better understanding of the context in which our cases occurred. Subsequently, the evolution of Turkish arms industry will be examined, analysing its rapid evolvement and recent success. Moreover, in this paragraph an assessment of the different types of arms considered in the study will be included. Finally, an overview of two pivotal conflicts in which Turkish drones have been used will be provided, analysing the dynamics and role Bayraktar TB2 had in Libya and Nagorno Karabakh.

2.2 Turkish foreign policy

Turkish foreign policy has undergone significant changes over time, influenced by both the international structure and domestic developments. To facilitate the understanding of Turkish foreign policy a temporal macro division will be employed based on global turning points and critical junctures. Taking inspiration from the work done by Oğuzlu

[69] Mainly problems in air defense systems recognition have been experienced on the ground, like in Libya. For further information: Stein, A. (30/08/2022). The TB2: the value of a cheap and "good enough" drone. *Atlantic Council*. Available at: https://www.atlanticcouncil.org/content-series/airpower-after-ukraine/the-tb2-the-value-of-a-cheap-and-good-enough-drone/

[70] Bakir, A. (16/11/2022). The UAE just received twenty drones from Türkiye. What's the backstory? *Atlantic Council.* Available at: https://www.atlanticcouncil.org/blogs/menasource/the-uae-just-received-twenty-drones-from-turkey-whats-the-backstory/

[71] ibidem

[72] Magid, P. (07/02/2024). Turkey's drone maker Baykar begins to build plant in Ukraine. *Reuters*. Available at: https://www.reuters.com/business/aerospace-defense/turkeys-drone-maker-baykar-begins-build-plant-ukraine-2024-02-06/

and Han (2023) the analysis will be divided in four distinct periods: the first period will span from the birth of the republic in 1924 to the end of World War II; the second period will cover the Cold War years; the third will encompass the time from the collapse of Soviet Union to the Global Financial Crisis of 2008.[73] Lastly, the period from 2008 onwards will be analysed in greater detail. Domestic factors will be considered in this historical overview to provide a comprehensive understanding of the evolution of Turkish foreign policy.

The Republic of Türkiye (*Türkiye Cumhuriyeti*) was founded in 1924 after a four-year struggle for independence and the signing of the Treaty of Lausanne, which marked the end of the occupation by foreign powers.[74] During the formative years of the Republic, under the leadership of Mustafa Kemal Atatürk, the Turkish stateman, founder and President of the Republic, meticulous planning and measures were undertaken to guarantee national integrity and address the considerable economic debts inherited from the Ottoman Empire, leading the government to maintain a neutral foreign policy[75]. The focus on state-building process, combined with the economic struggles and an outdated army, led to the decision of abstaining from involvement in the Second World War, maintaining a *super partes* stance and following their leader's slogan "peace at home, peace in the world".[76]

With the start of Cold War, and the raising Soviet threat in the region, Türkiye decided to side with the Western alliance, building ties with the United States. The growing security concerns lead the country to join the NATO alliance in 1952, facilitated also by the liberal economic policies implemented by the Democrat Party, in power from 1946.

In the 1960s, as the country was going back to democracy after a military *coup d'état* and the draft of a new constitution, Turkish decision makers started doubting Western commitments. This scepticism was particularly heightened by the Cuban missiles' crisis, in 1962, where the US president J. F. Kennedy agreed to withdraw the Jupiter missiles

[73] Oğuzlu T. & Han A. K (2023): cit
[74] On 26 of May 2022 the Republic of Türkiye changed its official name from The Republic of Türkiye in an official request submitted by the country's minister of Foreign Affairs to the Secretary-General of the United Nations. Available at: https://www.un.org/en/about-us/member-states/turkiye
[75] Kalaycıoglu, E. (2005). Turkish Dynamics, bridge across troubled lands. *New York, N.Y, USA: Palgrave Macmillan*, p. 58-63
[76] Hatipoglu, E., & Palmer, G. (2016). Contextualizing change in Turkish foreign policy: the promise of the 'two-good' theory. *Cambridge Review of International Affairs*, *29*(1), 231-250

from Türkiye, in return from Russia's removal of ballistic missiles from Cuba. Additionally, in 1964, American president Johnson stated that the US or NATO would have not defended Türkiye from an attack from Russia triggered by Turkish operations in Cyprus. These events led to a change in the foreign policy of the country and its perceptions of the allies, gaining multidimensionality in its interests and an increased attention to the Middle East region. During the 1980s, however, the increased tension between the two blocks, raised also by the Soviet invasion of Afghanistan, and the Islamic revolution in 1979, led Türkiye to reconsider the importance of the NATO alliance and its merits.[77]

The process of Westernization during the Cold War period was firmly rooted in the integration with the European countries. In 1959 Türkiye officially submitted its application to the European Economic Community (EEC), which was finalized in 1963 with the Association Agreement, commonly known as the Ankara agreement, which establishing a customs union between Türkiye and the EEC. However, with the expansion of the European Community, which led to the erosion of the privileges guaranteed by the agreement, and with Turkey's military operation in Northern Cyprus, relations with the European Union gradually deteriorated. The repeated economic and political crisis domestically led Türkiye to the decision of unilaterally suspend the relations with the Community in 1978.[78]

Internally the situation during the Cold War was characterized by instability. While the 1961 constitution had established a big step further in the protection and guarantee of rights and liberties, the internal turmoil led to severe changes in the 1970s, with restrictions of freedom and spreading of violence. On the economy side, the two oil shocks, first in 1973 with OPEC crisis and the second in 1979 due to the Islamic revolution, led the country to the adoption of a stabilization program with the International Monetary Found in 1980.

The third period, which covers the post-Cold War era, was characterized by a predominant role of the United States' interests, an expansion of Western/European values, and a success of the international liberal order principles. This period, also known

[77] Oğuzlu & Han (2023), p. 66-68
[78] Aydın-Düzgit, S., & Tocci, N. (2015). *Turkey and the European Union*. London and New York: Palgrave Macmillan

as pax Americana, saw the global spread of the international liberal order's institutions, and a common belief that democracy and free market capitalism would have brought progress, prosperity, and peace to every country.

In Türkiye, a new constitution was drafted in 1982 following a military coup, with martial law in place until 1987. In the 1990s liberalizing and democratizing reforms were implemented, which led to a liberalization of Turkish political life and implementation of rights and liberties. Concurrently, the rise of the Welfare Party (RP), with an Islamic orientation, gained traction among the Sunni population. Despite its ban by the Constitutional Court in 1997, the RP paved the way for other Islamist parties, ultimately leading to the creation of the Justice and Development Party (*Adalet ve Kalkınma Partisi*, AKP) in 2001 by Recep Tayyip Erdoğan and other "progressive" ex-RP members.

In this context, Türkiye sought to strengthen its ties with Western countries and position itself as a bridge between Europe and the Middle East. The European Union was at the peak of its power, spreading its values and norms to the ex-communist countries of Eastern Europe. Although disputes with Greece regarding the Aegean Sea, and Cyprus regarding the Turkish Republic of Northern Cyprus, were not solved, Türkiye managed to deepen its ties with the European Union, already considered as a strategic partner and objective. In 1995 the two parts signed the Custom Union Agreement, followed by the declaration of candidate status in 1999. The peak of the Europeanization process was reached in 2005, with the opening of the accession negotiation to the European Community. On the other side, Türkiye started to improve commercial ties with its eastern and southern neighbourhood before the start of the Gulf War in 1990, Turkish exports to the Middle East increased 23%.[79]

During the first decade of the XXI century Türkiye's foreign policy continued being pro-Western oriented. Even with the dominance on the domestic political ground, from 2002 onwards, of the Islamist party AKP and of its leader Erdoğan, the Europeanization process and collaboration with the allies continued, enhancing the narrative of hope and success around the effects of democratic values and liberalism.[80] In this period Türkiye acted with an enhanced knowledge of its regional power but anchored to its Western

[79] Kalaycıoglu, E. (2005), p. 143
[80] Oğuzlu & Han (2023), p. 70-71

allies.[81] The instruments adopted in foreign policy were following the Western methodologies: Türkiye supported the United Nations in their attempt to create dialogue between the two parts of Cyprus through the Annan Plan[82], tried to play a mediator role between Israel and Syria, and de-securitized its relationships with the neighbourhood.[83] The first decade of AKP's ruling was characterized by the "zero problems with neighbourhoods" foreign policy, formulated by the Prime Minister Ahmet Davutoğlu, and which translated in many agreements and diplomacy initiatives with the regions' partners, some examples can be found in the Black Sea Harmony, established in 2004, the creation in 2006 of the Black Sea Forum for Partnership and Dialogue, and the proposal to create a Stability and Cooperation Instrument for the Caucasus, in 2008.[84] This growing involvement in the Middle East was favoured also by the favourable internal context which, especially after the 2011 elections, the AKP was maintaining its majority, with promising polls that were increasing the party and its leader' self-confidence.[85]

In 2008 world dynamics changed. The Global Financial Crisis displayed the limits and hidden effects of the neoliberalist beliefs, showing the risks of globalization and capitalism. At the same time, non-Western countries started to gain power and became important actors in the international scene. Disbelief on Western values and principles increased, and the established global distribution of power started changing, creating more space for middle powers to increase their role in regional and global scenarios.

Turkish foreign policy ambitions in the middle east region increased, but maintained liberal methods from 2008 to 2015, following the normative and moral consideration in its foreign policy decisions.[86] However, Western power was decreasing, with a gradual decline of its attraction to Türkiye, which also favoured the identity-based transformation put in action by the AKP.[87] The objective of becoming a regional power in Middle East

[81] Kutlay, M., & Öniş, Z. (2021). Understanding oscillations in Turkish foreign policy: pathways to unusual middle power activism. *Third World Quarterly*, *42*(12), p. 2
[82] Acikmese, S. A., & Triantaphyllou, D. (2012). The NATO–EU–Turkey trilogy: the impact of the Cyprus conundrum. *Southeast European and Black Sea Studies*, *12*(4), 555-573
[83] Oğuzlu & Han (2023), p. 70-71
[84] Frappi, C. (2018). The Russo-Turkish Entente: A Tactical Embrace Along Strategic and Geopolitical Convergences. *Turkey: To-wards a Eurasian Shift? ISPI*, pp. 45–71
[85] Oğuzlu & Han (2023), p. 72
[86] Oğuzlu, H. T. (2020). Turkish foreign policy in a changing world order. *All Azimuth: A Journal of Foreign Policy and Peace*, *9*(1), 127-139
[87] Ibidem, p. 133

was being chased, but Türkiye's strategy developed around the role of interlocutor between West and East.[88]

During the past decade Turkish foreign policy drastically changed, experiencing a growth in the threat and use of military force, and promoting a new, more assertive, and ambitious foreign policy, which resulted in a militarization of the foreign policy.[89] The exact juncture of this change is variable, some studies assess it in 2011[90], with the Arab upheavals and Turkish involvement in them, while other in 2015[91], when some more assertive and active foreign policy started, for example with the opening of military bases in Qatar.[92] This change has also reflected its domestic dynamics, where the AKP and its leader Recep Tayyip Erdoğan, consolidated its power, taking an authoritarian populist turn and transforming the country to a hyper-presidentialism system in 2018.[93] The failure of the democratization attempt in the Arab world, of which Türkiye was a supporter and promoter, changed the position of Turkish ruling elite, which shifted the centre of its policies on its own security, military, and economic interests.

In Syria the change of regime and the threat posed by the Kurdistan's Workers Party (*Partîya Karkerén Kurdîstan* PKK) at the border with Türkiye, incentivised Türkiye to heavily operate military in the country, with Operation Euphrates Shield (2016), Operation Olive Branch (2018), Operation Peace Spring (2019), and Operation Spring Shield (2020). Turkish enhanced activism in the international arena has been also exemplified by the important role it played in the second Libyan civil war (2019), in the second Nagorno Karabakh war (2020), and in the war in Ukraine.

In the past years Türkiye has been able to pursue an active and assertive foreign policy, with considerable investments in the arms sector, notwithstanding the ongoing economic

[88] Kutlay, M., & Öniş, Z. (2021)
[89] Oğuzlu, H. T. (2020), p. 135
[90] Kutlay, M. & Öniş, Z. (2021): Understanding oscillations in Turkish foreign policy: pathways to unusual middle power activism, *Third World Quarterly*, 42(12), p. 4
[91] Oğuzlu and Han (2023), p. 73
[92] Middle East Eye, (17 December 2015). Turkey to open first base in Middle East in Qatar. Available at: https://www.middleeasteye.net/news/turkey-open-first-base-middle-east-qatar
[93] The system change was decided in September 2016 by referendum, but the change in the governmental system was put in action in July 2018. Kutlay, M. & Öniş, Z. (2021).

crisis that has been heavily affected the country, which is now dealing with an inflation rate for average consumer prices that reached 51.2% (annual percent change) in 2022.[94]

Its military drones have been at the centre of these operations and Türkiye has used them as a leverage for its foreign policy ambitions. Turkish armaments are currently deployed in Azerbaijan, Bosnia-Herzegovina, Iraq, Kosovo, Lebanon, Libya, Qatar, Somalia and Syria.[95] Furthermore, Türkiye signed contracts for arms sell in almost 30 countries, while Baykar Makina drones are present in 33 countries, with important local manufacturing projects in Ukraine, Kazakhstan and Indonesia, and a co-production plan signed in 2023 with Saudi Arabia, Ankara's biggest arms-export deal so far.[96] Its projections in Africa have been increasing, with almost 15 countries supplied with Turkish UAVs and a permanent base in Somalia.[97]

2.3 Turkish defence industry development

Türkiye's defence industry development must be understood from an historical and structural perspective. One of the reasons the newly formed Republic of Türkiye didn't join Second World War was its outdated army, which, after years of fought for the independence, needed deep and important reforms. Although these reforms were done, the modernization of the military system and of the industrial sector was still not able to reach the western countries' levels.

The entrance in the NATO alliance signed a great step forward for Türkiye, leading to deeper integration and partnership with the allies, especially the USA, which became the greatest partner in the Turkish imports of arms, and played a primary role in the modernization of the *Türk Silahlı Kuvvetleri* (TFK – Turkish Armed Forces).[98] Notwithstanding, the arms embargo imposed by the USA from 1975 to 1978, caused by the Turkish military operation in Northern Cyprus in 1973, faced the country with its own limits in the defence industry and operated as a political impulse to further modernization

---

[94] International Monetary Fund, October 2023, Country Data: Türkiye. Available at: https://www.imf.org/en/Countries/TUR
[95] International Institute for Strategic Studies, The Military Balance 2024, p. 150
[96] Ibidem, p. 67
[97] Ibidem, p. 67 & p. 147
[98] Kurç, C. (2017). Between defence autarky and dependency: the dynamics of Turkish defence industrialization. *Defence Studies, 17:3*, 263

and development of the Turkish arms industry. This allowed the narrative of defence autarchy to gain popularity within the country, further increased by the doubts surrounding western commitments.[99]

From the 70s onwards Turkish military technologies capabilities expanded significantly. In 1985 the Turkish Defence Industry Agency (*Savunma Sanayii Başkanlığı*, SSB) was established with the aim to balance investments in the modernization of the Armed Forces. The SSB, which is still active, had as main objective to operate as a controller and regulator for military technology's projects of both development and supply[100], and its work is strictly linked with the President of the Republic, indeed in 2018 an affiliation was established to the Presidency office.[101] Some of the major leading companies in the Turkish defence sector are Turkish Aerospace Industries (TAI), born in 1973, Baykar Makina,1986, Roketsan (*Roket Sanayii e Ticaret A.S.*), born in 1988, STM (*Savunma Teknolojileri Mühendislik ve Ticaret A.Ş.*) founded in 1991, and Aselsan, 1975. These companies receive the majority of SSB funds and constitute the present centre of Turkish innovation and production of armaments. The development of Turkish defence industry has been progressively accelerating, in 2001 the military expenditure of the country was US$ 7.22 billion, 18 years after, in 2019, the trend set its peak with US$ 20.44 billion.[102] From 2020 the expenditures decreased, due to the COVID pandemic, but in 2023 the data is said to be around US$ 16 billion[103], which will encounter a further 150% increase in 2024 with US$ 40 billion declared to be allocated as official budget for the year.[104]

At the same time the country's arms export has accelerated: while in 2010 the number of exports, according to the Stockholm International Peace Research Institute's (SIPRI)

---

[99] Bastian, J. (2024). *Turkey: An emerging global arms exporter. Growing competitiveness and strategic recalibration of the Turkish defense industry* (No. 6/2024). SWP Comment

[100] Ibidem

[101] Ibidem

[102] Toksabay, E., & Nomiyama, C., (17/10/2023). Turkey to allocate 150% more to defense budget in 2024 minister. *Reuters*. Available at: https://www.reuters.com/world/middle-east/turkey-allocate-150-more-defense-budget-2024-minister-2023-10-17/

[103] Official data retrieved from World War Bank and Stockholm International Peace Research Institute (SIPRI) databases. Available at: https://data.worldbank.org/indicator; https://milex.sipri.org/sipri

[104] Toksabay, E. (17 October 2023). Turkey to allocate 150% more to defense budget in 2024 -minister. *Reuters.* Available at: https://www.reuters.com/world/middle-east/turkey-allocate-150-more-defense-budget-2024-minister-2023-10-17/

database, was equal to 70 TIVs[105], after a decade the number grew to 251 and, just one year after, in 2021 it reached its peak with 438 TIV of exports.[106] Ultimately, a relevant data provided by SIPRI is the real change in arms revenue of the top 100 companies by country, which shows Türkiye with a 21.7% positive change in the annual revenues, being the second greatest change in this period.[107]

Turkish defence industry has managed to achieve a great step forward in its development and global competitiveness. In recent years it has been able to specialize in the niche drones' sector and successfully start competing with the top producing country. Unmanned Aerial Vehicles (UAVs), also known as drones, are a relatively new technology, which in recent years has become a force multiplier in conflicts.[108] Unmanned Aerial Vehicles (UAVs) are aircraft that operate in the absence of a human pilot onboard, being instead controlled remotely or autonomously, carrying both lethal and nonlethal equipment, based on their objective.[109]

When talking about UAVs, we are generally referring to a system composed by three components: the aerial vehicle, the ground control station, and the operator. This specific composition system is what characterizes UAVs but not all drones, indeed all UAVs are drones, but not all drones are UAVs. The first useful categorization of UAVs is based on their weight, in the 2024 annual report of the International Institute for Strategic Studies (IISS) light UAVs are considered if between 20 and 150 kilograms, medium between 150 and 600 kilograms, and heavy more than 600 kilograms. A study made by Hassanalian and Abdelkefi in 2017 highlights how the general definition of drones can include other type of vehicles that have different wight and wingspan features, indeed in their classifications of drones the weight is variable from 5 to 15000 kilograms[110]. Other

---

[105] TIV is the Trend Indicator Values used by the Stockholm International Peace Research Institute to calculate transfers indicators. This parameter considers the production costs of a standardized unit and reflects the transfers of military resources, rather than solely the financial value of the transfer. For more information on the methods of quantification: https://www.sipri.org/databases/armstransfers/sources-and-methods

[106] Wezeman, P. D., Gadon, J., & Wezeman S. T. (2023). Trends in international arms transfers, 2022. *SIPRI,* https://doi.org/10.55163/CPNS8443

[107] Data retrieved from: https://www.sipri.org/visualizations/2023/change-arms-revenue-sipri-top-100-country-2021-22

[108] Calcara, A., Gilli, A., Gilli, M., Marchetti, R., & Zaccagnini, I. (2022): cit

[109] Hassanalian, M., & Abdelkefi, A. (2017). Classifications, applications, and design challenges of drones: A review. *Progress in Aerospace sciences*, *91*, 99-131.

[110] Ibidem, p. 99-100

categorizations of UAVs centred on different characteristics, always Hassanalian and Abdelkefi focused on flight features, analysing the horizontal take-off landing (HOTOL) and vertical take-off landing (VOTOL) UAV.[111] Differently, Gupta et al. (2013) classify UAVs based on their flight characteristics, differentiating between High Altitude Long Endurance (HALE) drones, mainly used by armed forces to carry out long distance surveillance and reconnaissance operations, Medium Altitude Long Endurance (MALE) drones, similar to the first one but with shorter ranges, and Tactical Unmanned Aerial Vehicle (TUAV), which are smaller in size and equipped with simpler systems, often utilized by mobile army battle groups. [112]

Lastly, further distinctions have been done based on the employment of the vehicles: in loitering attack munitions (LAMs) drones used for kamikaze's attacks, therefore expendable during war and much cheaper; intelligence, surveillance, and reconnaissance drones (ISR) are used for capturing images and gaining data from the field; lastly, unmanned combat autonomous vehicles (UCAV), are equipped with missile weapons, and can engage in close ground strike operations with the adversary.[113]

Turkish armament didn't develop in short times, especially due to the need of investments in expertise and infrastructures. A first strategy adopted was that of outsourcing, of which the first serious attempt was made in 1995 with the purchase of USA's GNATs, for anti-terrorism purposes.[114] At the same time Turkish government started to invest in the production of weapons domestically made, accelerating the process of research and development (R&D), this need was enhanced by the security concerns of the country, deeply connected to the problem of dependency in the defence sector.[115] These policies and investments have had important results in the UAVs sector, where now Türkiye is one of the world's top producers.

---

[111] Hassanalian, M., & Abdelkefi, A. (2017): cit

[112] Gupta, S. G., Ghonge, D. M., & Jawandhiya, P. M. (2013). Review of unmanned aircraft system (UAS). *International Journal of Advanced Research in Computer Engineering & Technology (IJARCET) Volume*, *2*

[113] Gilli, A. & Gilli, M. (2016). The Diffusion of Drone Warfare? Industrial, Organizational, and Infrastructural Constraints, *Security Studies, 25*, 50-84

[114] Kinik, H., & Çelik, S. (2021). The Role of Turkish Drones in Azerbaijan's Increasing Military Effectiveness. *Insight Turkey*, *23*(4), 177

[115] ibidem

The indigenous Turkish UAVs active in the Turkish Armed Forces (TFK - *Türk Silahlı Kuvvetleri*) are listed in the table below.

Turkish indigenous UAVs active in TFK - 2024

Model	**Company**	**Features**	**Employment**	**Armed Force (number)**	**Year**
Akinci	Baykar Technologies	Heavy	CISR/ISR	Army (3) Airforce (13)	2021
Bayraktar TB2	Baykar Technologies	Medium	CISR/ISR	Army (ε70) Naval Aviation (9) Gendarmerie (ε36) Coast Guard (6)	2014
Aksungur	Turkish Aereospace Industry (TAI)	Heavy	CISR	Naval Aviation (5)	2019
Anka-S	Turkish Aereospace Industry (TAI)	Heavy	CISR	Naval Aviation (8) Airforce (19) Gendarmerie (6)	2010

Table 1: UAVs present in Turkish Armed Forces. Source: The annual assessment of global military capabilities and defense economics, by IISS 2024 Military Balance. Data developed by the author.

The local production deeply innovated the Turkish arms industry, reducing the presence of foreign arms in the TKF, other than the UAVs sector many achievements have been made also in the Navy.

While these great achievements have to be acknowledged, to dive deeper in the research two points must be considered: first, a considerable part of the TAF's armament is imported; second, the indigenous drones used in the TFK and widely exported have a significance dependency on imports of engines.

Considering the first point, the Turkish armament is still very reliant on imported arms, the Airforce mainly uses F16 C/D, made by the USA, or the Russian S-400 air defence system, as well as some ISR UAVs imported from USA (Falcon 600, GNAT 750),

UK (CL-89) and Israel (Heron).[116] However important this reliance on imported arms is, it's also understandable considering the relatively young age of the domestic industry.

What's more interesting for the purposes of our research is the reliance still present on imports of strategic assets. Foreign defence companies have been of strategic importance in the process of industrialization of the country since partners that are willing to invest in and share technologies and know how have been necessary for the domestic development.[117] However, with the outstanding improvements showed especially in the UAVs industry, an increase of international demand has led to an increase of production, and therefore a growth of dependency on importers countries for that specific equipment.

In 2021, the images of Turkish drones equipped with the Wescam CMX-15D optronic-ball, a product designed by the USA and manufactured in Canada, being used in Armenia posed significant challenges to Turkish affairs.[118] Canada immediately stopped sales to Baykar, and the resulting embargo nearly halted the sale of TB2 to Morocco. However, Morocco initiated a lobbying activity, ultimately persuading Ottawa and Washington to agree on the sale.[119] Canada re-started the sale of optical equipment in January 2024, after Turkish decision of approving Sweden's join into NATO.[120]

This case is an example of how dependencies are constraining and may lead to problems in Turkish affairs. In the next chapter an assessment of the extent of this dependency will be provided, in order to understand whether and how they changed through time and if there have been positive developments in reducing them.

2.4 Turkish drones in Libya and Nagorno Karabakh

The previous paragraph showed how Turkish drones have been achieving a greater role in modern conflicts and how their production and demand has been increasing in recent times. Furthermore, it has been analysed how Turkish foreign policy has been changing,

---

[116] International Institute for Strategic Studies, The Military Balance 2024
[117] Kurç, C. (2017), p. 270
[118] Rossiter, A., & Cannon, B. J. (2022). Turkey's rise as a drone power: trial by fire. *Defense & Security Analysis*, *38*(2), 223
[119] Africa Intelligence (07/05/2021). Morocco: Canada bends rules for drone-maker Baykar and L3 Harris. Available at: https://www.africaintelligence.com/
[120] Scherer, S., & Shakil, I. (29 January 2024). Canada drops weapons export controls to Turkey, including drone technology. *Reuters*. Available at: https://www.reuters.com/world/canada-drops-weapons-export-controls-turkey-including-drone-technology-2024-01-29/

shaped by the international developments, and influenced by its domestic dynamics. In this paragraph we will introduce two illustrative cases in which Turkish UAVs, specifically TB2s, have been deployed by one of the conflict parties. We will assess their performance and analyse Türkiye's foreign policy role in the respective conflicts.

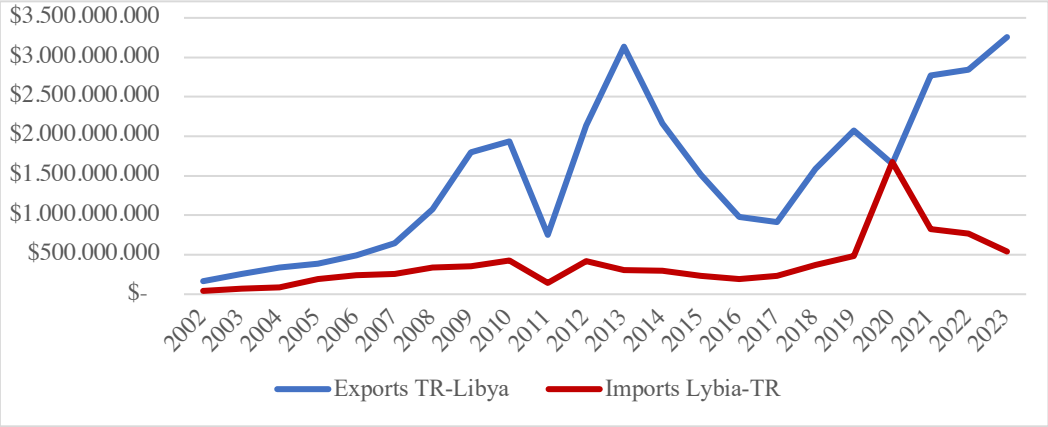
After the death of Muammar Qaddafi in 2011 and the end of its regime over Libya, the country fell in a fought for power among multiple factions. In 2015 two groups emerged as the most powerful: the Government of National Accord (GNA) based in Tripoli, under the leadership of Fayez al-Sarraj, recognized as an interim government by the United Nations in 2015and supported by state forces like Türkiye, Italy and Qatar[121]; and the (LNA) based in Tobruk and led by General Khalifa Haftar, supported by militias, private military troupes, like Wagner, and state forces like the UAE, Egypt and Russia.[122] The period taken into analysis covers the years from 2019 to 2020, where the two factions fought for the control over Tripoli and over the territory of the Tripolitania region. The war took place in the extremely unique territory and geography of the country which made the control of transport infrastructures the key objective to win.[123] When the LNA's Western Libya campaign started in April 2019 the GNA experienced significant losses. The LNA had a superior air power that enabled them to enter the city from the south. At the same time the GNA was not receiving enough support from its former allies, this led the interim government to formally ask the help of Türkiye in December 2019, which was approved by the parliament in January 2020, enabling the start of aid and troops provision.[124] At first the Bayraktar TB2 drones supplied by Türkiye were not enough to overcome LNA's Russian defence system and were mostly destroyed.[125] As Haftar's soldiers were advancing in Tripoli, Turkish support increased significantly, providing the GNA with air defence, electronic warfare systems and personnel.[126] With the introduction

[121] Fajarini, V. I., & Anam, M. Z. (2022, March). Turkey Involvement in Libyan Civil War Under the Government of Recep Tayyip Erdoğan 2019-2020. In *International Conference on Public Organization (ICONPO 2021)* (pp. 461-472). Atlantis Press.
[122] Shoaib, M. (2020). Turkish Intervention in the Libyan Civil War: Aims and Challenges. *Journal of Strategic Affairs 5*, no. 1, p. 35
[123] Borchert, H., Schütz, T., & Verbovszky, J. (2021). Beware the Hype. What Military Conflicts in Ukraine, Syria, Libya, and Nagorno-Karabakh (Don't) Tell Us About the Future of War, Hamburg, *Defense AI Observatory*
[124] Fajarini, V. I., & Anam, M. Z. (2022, March), p. 466-467
[125] Borchert, H., Schütz, T., & Verbovszky, J. (2021), p. 28-35
[126] Calcara, A., Gilli, A., Gilli, M., Marchetti, R., & Zaccagnini, I. (2022), p. 153

of larger UAVs, like ANKA-S and Bayraktar TB2, with optimization in the operational tempo, of air defence systems and the bad performances of some LNA's defence systems (like the Russian Psntsir-1) enabled the GNA's counteroffensive to be successful.[127] It's important to underline that the conflict did not develop only through aerial attacks, close combat was widely present and played a fundamental role in the results of the war.[128]

Türkiye's support to the GNA can be understood within the framework of the "Strategic Depth Doctrine", adopted since 2014 and mostly known as Neo-Ottomanism. It combines neorealist policies with the ideology of leveraging on historical and geographical influence on the region.[129] This doctrine, developed by the Prime Minister Ahmet Davutoglu (2014-2016) and pursued by President Erdoğan, creates the perfect validation and base for Turkish ambitions in the region. Between Libya and Türkiye trade has been present since the 1980s and has continued notwithstanding the instability Libya has experienced from the Arab Springs onwards. Looking at Graph 1 it's visible the importance of Libya's market for Turkish economy, characterized by export-driven strategies.

Türkiye export-import to Libya 2002-2023



Graph 1: Türkiye Export-Import to/from Libya 2002-2023. Source: World Integrated Trade Solution (WITS). Availableat:https://wits.worldbank.org/CountryProfile/en/Country/LBY/Year/2019/TradeFlow/Export/Partner/TUR/Product/All-Groups . Data developed by the author.

[127] Borchert, H., Schütz, T., & Verbovszky, J. (2021), p. 30-31
[128] Calcara, A., Gilli, A., Gilli, M., Marchetti, R., & Zaccagnini, I. (2022), p. 154
[129] Fajarini, V. I., & Anam, M. Z. (2022, March), p. 467-468

The interests of Türkiye in Libya, however, go much further than trade relations. The military assistance agreement reached in 2019 between Erdoğan and al-Sarraj was sided by a memorandum of understanding on the maritime boundaries in the Mediterranean Sea. For the first time, Turkey had succeeded in achieving an on a border of a continental shelf, increasing its power in the debate with Greece, Cyprus, and Israel on the eastern Mediterranean.[130] Another example of drones' performances effects on Turkish foreign policy is the opening of negotiations with Algeria for the acquisitions of Bayraktar TB2 right after the successes on the Libyan battlefield.[131]

The conflict between Armenia and Azerbaijan over the region of Nagorno Karabakh has been present for almost one century. Since 1921 Nagorno Karabakh had been part of Azerbaijan with an autonomy status, but in 1988 Armenia requested the transfer since Armenian were the majority of the population. However, the dispute turned violent after the collapse of the Soviet Union, and in 1994 the two parts achieved a resolution. The military and economic superiority of Armenia enabled its victory and gave independence to the territory, although with a practical dependency and integration with Armenia.

In the 30 years between the first and the second conflict, escalated in 2020, the two countries held a different approach to development, while Armenia was pervaded by a false sense of superiority, Azerbaijan promoted a decade-long military modernization and diversification, also helped by the boom in its revenues from oil.[132] This enabled the country to claim back the region and start an offensive against the Armenians in September of 2020. The second war in Nagorno Karabakh was also described as the "First Drone War", because of to the intensive use and pivotal role they played on the battlefield, which have proved a great efficiency due to the region's mountainous terrain specificities.[133] Of extreme importance was also the role of the allies of the two parts: while Armenia was supported and supplied by Russia, with which relations were slowly

[130] Seufert, G. (2020). Turkey shifts the focus of its foreign policy: from Syria to the eastern Mediterranean and Libya (No. 6/2020). *SWP Comment*, p. 4
[131] Dahmani, F., & Samba, L., (4 September 2020). Turkey's push to win over the Maghreb: The gateway to Africa. *The Africa Report*. Available at: https://www.theafricareport.com/40438/turkeys-push-to-win-over-the-maghreb-the-gateway-to-africa/
[132] Borchert, H., Schütz, T., & Verbovszky, J. (2021), p. 31-32
[133] Dixon R., (11 November 2020). Azerbaijan's drones owned the battlefield in Nagorno-Karabakh — and showed future of warfare. *The Washington Post*. Available at: https://www.washingtonpost.com

deteriorating, Azerbaijan was received an "unconditional support" by Türkiye[134], which provided armaments and fighters for the ally.[135] Turkish drones, mainly Bayraktar TB2, were the main actors in the battlefield and the protagonist of the conflict, praised and lionized by Turkish and Azeri governments, to the point that Azerbaijan President Ilham Aliyev stated: *"Thanks to the advanced Turkish drones owned by the Azerbaijan military, our casualties on the front have shrunk. [...] These drones show Turkey's strength, and this also empowers us".*[136] In the war Baykar drones showed their abilities in providing real time pictures of the battlefield and destroying Armenian forces and air defence systems, however, the success of the drones was greatly increased with the propaganda of Türkiye and Azerbaijan.[137] The two countries pursued a narrative of exaltation and praise of Baykar's drones, with slogan, advertisements and videos showing the performance in the field.[138] Turkish interests in the conflict go further than "Turkic solidarity" and respect of the Azeri's national integrity[139]. Türkiye has been trying to gain a more influential role in Central Asia and, also because of Azerbaijan's large oil and gas reserves, has actively search for a leading position in the promotion of the Baku-Tbilisi-Ceyhan pipeline, which has strategic value for Turkish energy interests (Figure 1).

[134] xxxv. Türkiye Cumhuriyeti Dışişleri Bakanlığı Tarihçesi (Ministry of Foreign Affairs of the Republic of Türkiye), "Statement of the Spokesperson of the Ministry of Foreign Affairs, Mr. Hami Aksoy, in Response to a Question Regarding the Armenian Attacks on Azerbaijan Which Started This Morning", (27 September 2020). Available at: https://www.mfa.gov.tr/sc_-94_-ermenistan-in-azerbaycan-a-karsi-baslattigi-saldiri-hk-sc.en.mfa

[135] Evans, D., (28 September 2020). Turkey deploying Syrian fighters to help ally Azerbaijan, two fighters say. *Reuters*. Available at: https://www.reuters.com/

[136] Soylu, R., (5 October 2020). Turkish armed drones used against Armenia, Azerbaijan confirms. *Middle East Eye*. Available at: https://www.middleeasteye.net/news/armenia-azerbaijan-conflict-turkey-drones

[137] Hwang, W., & Song, S., (2022), p. 449

[138] Postulart, J. (2021). Death from above: on the propaganda value of drones in the 2020 Nagorno-Karabakh war. *University of Amestard*, MA thesis

[139] The territory of Nagorno Karabakh is completely surrounded by Azerbaijan's territory.

The Baku-Tbilisi-Ceyhan pipeline

Figure 1: Location of Baku–Tbilisi–Ceyhan pipeline. Copyrights: https://creativecommons.org/licenses/by-sa/4.0/

After these conflicts, Turkish sales of drones have expanded and, as it will be analysed in the next chapter, this also has a major impact on the ongoing war in Ukraine. The demand of Turkish drones has risen for three main reasons: first, its efficiency, proven in the conflicts already analysed and in national interests' operations done in the boarder with Syria against the PKK and intervening in the Syrian civil war in 2018, with the operation Olive Branch, and 2020 with the operation Spring Shield.[140] Second, the comparative cheap price with good quality, for example the Chinese CAIG Wing Loong II or the Iranian Shahed, have cheaper drones but with lower proven efficiency. A Bayraktar TB2 costs around $5 million, while an American MQ-9 Reaper price is $20 million.[141] Third, and central, reason: the no strings attached policy of the private companies, which incentives states to buy.[142] This policy method has had great advantages for the diversification of partners and deals of Turkish companies; however, its efficiency is not certain that in the long term, arms' market is necessarily linked to geopolitics, even more

[140] Hwang, W., & Song, S., (2022), p. 448
[141] International Crisis Group (20 December 2023). Türkiye's Growing Drone Exports. Available at: https://www.crisisgroup.org/europe-central-asia/western-europemediterranean/turkiye/turkiyes-growing-drone-exports
[142] Kurç, C. (2023): No Strings Attached: Understanding Turkey's Arms Exports to Africa, *Journal of Balkan and Near Eastern Studies*

in a country were companies' production is deeply connected to the central power, therefore this might cause disagreements with old allies and reluctancy from new ones. However, as it stands, this policy has worked enough to assure a solid presence of Türkiye on the globe, being a solid pillar of a new image of the country in world's politics, emblem of its position as a rising middle power and of its ambitions on the world's stage.

CHAPTER THREE

Drone Diplomacy: Türkiye's Foreign Policy Strategies in the UAV Era

3.1 Introduction

This chapter seeks to shed light on the dynamics of Turkish exports in the drone and munitions industries and how these relate to foreign policy choices. The hypothesis is that the country's positive trade balance and the growing exports, particularly in the drone industry, has been influential in determining the decisions taken in foreign policy, which wouldn't have been as assertive without the role gained thanks to the exports.

When examining Türkiye's position in the current crises, it is visible that its relevance and presence are diffused, and that it is involved in a variety of ways, ranging from assertive and active to diplomatic and indirect, and there are very few decisions tables where Türkiye is not represented, either as a mediator or a supporter.

For the first part of this analysis, exports and imports in the defence sector will be analysed closely, in order to better understand to what extent exports can be considered as a source of real power for Türkiye. The problem that has been introduced in the previous chapters relies on the dependency on imports necessary for the production of drones. Through data retrieved mainly from the Stockholm International Peace Research Institute database[143] and annual reports[144], we will analyse the change in Türkiye's participation in the arms market, highlighting trends in general imports and exports. Afterwards, a deeper analysis of drones' exports and the imports of its components, as engines and sensors, will be made.

All data analysis will be made with the SIPRI arms transfer database, which uses a specific classification methodology to quantify every arm deal. This classification is indicated with the Trend Indicator Value (TIV) and doesn't primarily focus on the cost of the deal, but rather the value of the transfer, calculated through the type of weapon, number ordered, year of order and delivery, the performances characteristics of the weapon.[145] Maintaining this variable of classification will enable the study to be more precise and coherent approach. Having assessed the market role and relevance of drones, the analysis will then explore how these dynamics influence foreign policy decisions. By

[143] SIPRI database on arms transfer. Available at: https://www.sipri.org/databases

[144] SIPRI yearbook archive on Armaments, Disarmaments and International Security. Available at: https://www.sipri.org/yearbook/archive

[145] SIPRI Arms Transfer Database, Source and Methods. Available at: https://www.sipri.org/databases/armstransfers/sources-and-methods

examining the cases of Ukraine and Africa, the role of drones will be contextualized and compared with other influential variables. In the case of Ukraine, Türkiye's strategic sale of drones and its balanced diplomatic stance will be discussed, showcasing how these exports have allowed Türkiye to maintain significant influence in a highly volatile conflict, enhancing its role as a mediator while preserving bilateral relations with both Ukraine and Russia. This nuanced position underscores the importance of UAVs not just as military assets but also as tools of diplomatic leverage. The African case will delve into how Türkiye's arms exports and multifaceted diplomacy have bolstered its influence across the continent. Here, we will explore how Turkish drones, with their cost-effectiveness and high efficiency, have carved a niche in a competitive market dominated by established players like the US, Russia, and China. Furthermore, Türkiye's "no-strings attached" policy, combined with its strategic economic and cultural engagements, has solidified its partnerships with African nations, enhancing its geopolitical footprint.

Both cases illustrate how success in the drone industry has fortified Türkiye's foreign policy, positioning it as a significant player in global affairs. This dual approach of leveraging military technology for diplomatic gains and establishing a robust presence in emerging markets exemplifies how Türkiye is reshaping its international strategy. The increased visibility and acclaim of Turkish UAVs not only elevate Türkiye's status as a competitive defence exporter but also empower it to exert greater influence on the global stage, making it a pivotal actor in shaping the future international order.

3.2 General arms' exports and imports analysis

In this paragraph we will analyse in greater details the change of exports and imports in the defence industry of Türkiye. The country's entrance into the export market as a global supplier is relatively new, and in recent years, it has grown rapidly. Turkish armaments have historically been intertwined with and reliant on its western partners, who have exported not just weapons but also infrastructure, expertise, techniques, and strategies. These connections, which are the outcome of deliberate foreign policy choices made in the past, are vital and crucial, providing the nation with a strong foundation upon which to develop its own industry and increase its degree of autonomy. Particularly in the past ten years, Türkiye's foreign policy has become more assertive and militarised, and its weapons have shown to be crucial in a number of conflicts, drawing attention and demand

abroad. This trend has been specifically evident in the Turkish UAV industry. In 2018 the first UAV developed and employed by a Turkish company has been officially employed and sold on the market. From this date onwards, drones have become a central asset of Turkish arms exports, which have grown exponentially. According to Crisis Group's open-source tracking, Turkish drones have proven effective in a number of conflicts and are currently being used by over 26 countries.[146] Meanwhile, the CEO of one of the industry's leading companies, Selçuk Bayraktar, has declared that his company, Baykar, has exported to 33 countries.[147] However, the impact exports have on Turkish international positioning can't be properly understood without also looking at the imports data. In the past, imports were everything Türkiye relied on for its defence procurement, and, although they have drastically decreased, some assets are still not indigenously made and require to be bought from other countries.

Our analysis will be based on data retrieved from SIPRI database and IISS reports, as well as the National Yearly report made by the Defence and Aerospace Industry Manufacturers Association (*Savunma ve Havacılık Sanayii İmalatçılar Derneği,* SaSad). After providing a more complete overview of Turkish arms exports and imports, we will look closer at the change in the last decades and their correlation. Furthermore, we'll try to better understand the impacts drones have had on Turkish total arms revenues. In 2023 Türkiye was the 11th larger exporter and the 19th largest importer of major arms.[148] This data gains relevance when looking at the change in time: in 2016 the country's ranking in export was set at 16th place, while in imports it stayed in the top-ten for 2015, 2016 and 2017.[149] The table below shows the change in the yearly rankings in exports and imports from 2018 to 2023.

[146] International Crisis Group (December 20 2023)
[147] Baykar Makina (04 April 2023). "Bayraktar TB2 SİHA ihracatı, Baykar'ı "küresel savunma ligine" taşıdı". Available at: https://www.baykartech.com/tr/haberler/bayraktar-tb2-siha-ihracati-baykari-kuresel-savunma-ligine-tasidi/#:~:text=Bayraktar%20TB2%20SİHA%20için%2032,güvenliğine%20katkı%20sağladığını%20ifade%20etti
[148] SIPRI yearbook 2023. Available at: https://www.sipri.org/yearbook/archive
[149] SIPRI yearbook 2014, 2015, 2016. Available at: https://www.sipri.org/yearbook/archive

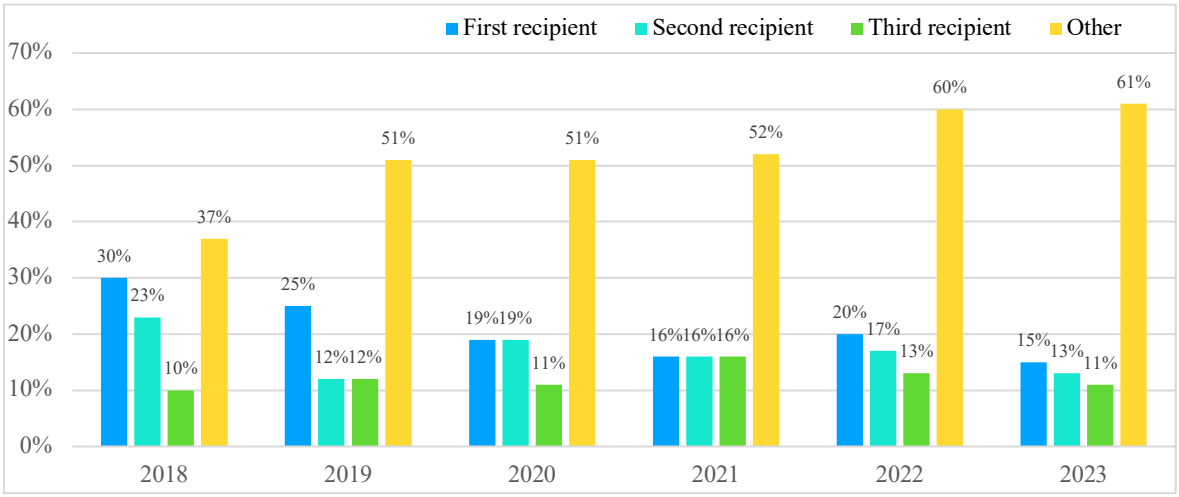
Year	*Rank in exports*	*Main recipients*	*Quinquennial change*	*Rank in imports*	*Main suppliers*	*Quinquennial change*
2018	14th	UAE; Turkmenistan, Saudi Arabia	2013-2018: *+170%*	13th	USA; Spain, Italy	2013-2018: *-21%*
2019	14th	Turkmenistan; Oman, Pakistan	2014-2019: *+86%*	15th	USA; Italy, Spain	2014-2019: *-48%*
2020	13th	Oman, Turkmenistan, Malaysia	2015-2020: *+30%*	20th	USA; Italy, Spain	2015-2020: *-59%*
2021	12th	Turkmenistan; Oman; Qatar	2016-2021: *+31%*	17th	Italy; USA; Spain	2016-2021: *-56%*
2022	12th	Qatar; UAE; Oman	2017-2022: *+89%*	17th	Italy; Spain; Russia	2017-2022: *-49%*
2023	11th	UAE; Qatar; Pakistan	2018-2023: *+106%*	19th	Spain; Italy; Russia	2018-2023: *-23%*

Table 2: Turkish global rankings and data. Source: SIPRI Trends in International Arms Transfers yearbook 2018, 2019, 2020, 2021, 2022, 2023. Available at: https://www.sipri.org/research/armament-and-disarmament/arms-and-military-expenditure/international-arms-transfers/recent-pubs Data developed by the author.

The quinquennial change helps understand the percentage of change in five years in both exports and imports. Combining the data we can calculate the exports change percentage in a decade, from 2013 to 2023, which is equal to 276%, while the imports change percentage is 44%. While exports increased at a fast pace leading to a significant change in the 10 years considered, imports decreased more slowly, however signifying a gradual detachment from suppliers and progress in reaching more autonomy. Relevant is also the data on the main suppliers of arms to Türkiye, while Italy and Spain keep their position in the top three for all five years, in 2022 the USA is substituted by Russia. This doesn't imply a complete termination of imports from the USA to Türkiye, which remain of primary importance and on at the top of the suppliers' list, but highlights the distance increasing between the two countries, of which important evidence is given by the exclusion of Türkiye from the F-35 procurement project and its deal with Russia for the

S-400 air defence system. Another significant data is given from the percentages of recipients and suppliers. In Graph 2 a division by year of the top three recipients' percentages is exposed. What is visible is a decrease in the singular and cumulative percentages of the top three recipients and an increase of the "Other" column. This data signifies the diversification of buyers, which also increased in number due to the development of Turkish domestic arms industry.

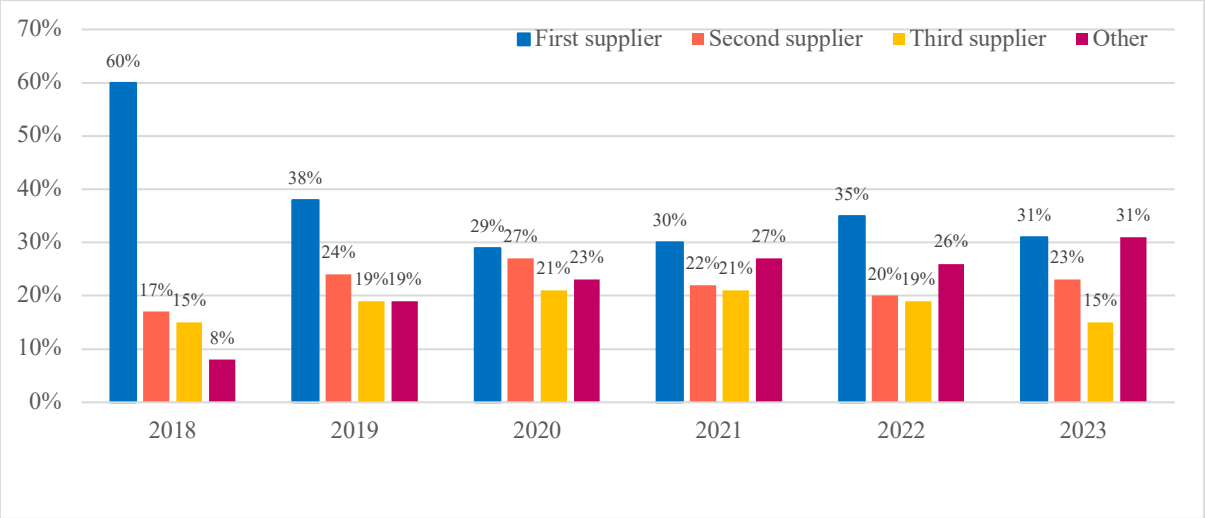
Türkiye's arms recipients' percentages



Graph 2: Türkiye's arms exports percentages. Source: SIPRI Trends in International Arms Transfers yearbook 2018, 2019, 2020, 2021, 2022, 2023. Available at: https://www.sipri.org/research/armament-and-disarmament/arms-and-military-expenditure/international-arms-transfers/recent-pubs Data developed by the author.

A similar trend can be seen in the graph below which shows Türkiye's percentages of suppliers in the arms sector. The graph highlights the percentages of the first, second and third supplier and, as last bar, the aggregation of all the other suppliers.

Türkiye's arms suppliers' percentages



Graph 3: Türkiye's arms imports' percentages. Source: SIPRI Trends in International Arms Transfers yearbook 2018, 2019, 2020, 2021, 2022, 2023. Available at: https://www.sipri.org/research/armament-and-disarmament/arms-and-military-expenditure/international-arms-transfers/recent-pubs Data developed by the author

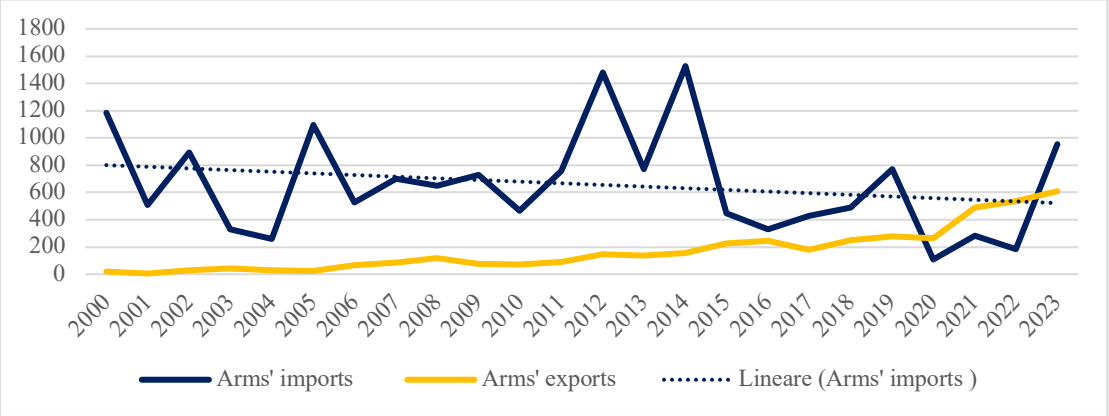
In Graph 3 it's visible a gradual reduction of the gap between the first, second and third supplier, as well as an equalization of the "Other" column with the average of the first three, while in 2018 the difference between the first supplier and others is of 52%, in 2023 they reach the same value. The transition from an 8% to a 31% of the non-top-three suppliers is the result of a decrease of the overall imports, which will be showed later, but especially of a diversification in the portfolio of arms procurement of the country. When looking at imports some contextualization is necessary. Türkiye imports finished goods as well as specific resources for its domestic manufacturing. Numerous industries have purchased finished goods, including the air force (which uses Italian combat helicopters, Russian S-400s, and American F-16s) and the navy (which uses German submarines and Spanish ships).[150] All these acquisitions highlight an industry that has been much reliant on imports for its strategic weaponries and vehicles, and although progress is being made, these imports are still present in current years balances.

Looking at the trend in Turkish arms exports and imports (Graph 4), while for imports a less linear trend is observable, in the export data it's visible a constant increase. Between 2019 and 2020 the COVID-19 crisis has implied a drop in imports and slowdown in

[150] SIPRI arms transfers database, Türkiye imports 2000-2024

exports, phenomenon explained also in the national yearly report made by SaSaD in 2020.[151]

Change in Turkish arms exports and imports



Graph 4: Change in Turkish arms exports and imports (2000-2023). Source: SIPRI Arms transfer database. Available at: https://armstransfers.sipri.org/ArmsTransfer/ . Data developed by the author.

While exports have a clear positive tendency, imports are subject to peaks and lows that make difficult to visualize an intelligible trend. We therefore chose to calculate the linear trend of the distribution of data in imports to understand which slope, positive or negative, the distribution is characterized with. The inclination of the linear trend is calculated through the covariance of the two variables x (years) and y (TIVs in millions), which results in having a negative inclination, while the intercept of the equation defining the trend is calculated with the least square method rule, by subtracting the average of y to the average of x multiplied by the covariance. The linear trend is represented in Graph 4 with the equation $y = -12x + 812$.

This straightforward calculation allows us to observe and confirm the declining trend in imports, indicating, within the scope of our analysis, a reduction in Türkiye's overall arms imports and consequently, a rise in the nation's domestic capability to independently manufacture defence weaponry.

[151]SaSaD's Report 2020. Available at: https://www.savunmahaber.com/en/sasad-defence-aerospace-sector-performance-2020-report/

3.3 Drones' analysis

3.3.1 Drones' exports and imports analysis

In the Turkish defence industry, drones' technology has been the most successful attempt of local development of know-how and procurement planning, widely demonstrated in the export rates.

The local production of UAVs started in the early 2000 with the company Baykar, founded as a supplier of automotive machine parts in 1984, but soon passed in the ends of the two sons of the founder, Haluk and Selçuk Bayraktar, respectively CEO and CTO of the company. In 2000 the first R&D on UAVs systems is launched, which will lead to the first Turkish-made mini-UAV to be included in the TAF in 2007. In 2014 a significant step forward was made with the first fully autonomous flight of the Bayraktar TB2, a medium CISR (Combat and ISR) UAV, characterized by a wingspan of 12 meters, flight endurance of 27 hours and maximum take-off weight of 700kg.[152]

The innovation brought by the company was significant: the country, before 2014, was relying on imported UAV mainly by the USA and Israel, the last delivery was made in 2010, of the significant acquisition of 10 Heron UAV by Israel.[153] Baykar has showed impressive improvements in the last years, with an increase in revenues and presence in the global market. In the 2022 SIPRI's top 100 arms-producing and military services companies, Baykar has achieved the 76th position worldwide, escalating of 24 places the ranking from the prior year, and increasing its revenues of +94% from 2021. This numbers are expected to increase since the company's drones, especially TB2s are present in almost 30 countries.[154] The company produces and sells mainly UAVs, the most known and sold by now are the Bayraktar TB2 and the Akinci, three other mini and small drones are already on the market, while two UAVs are being produced, the KIZILELMA and the TB3, both of which are currently finishing their test flights.

With the start of the local production imports of aircrafts dropped significantly and other Turkish companies started producing indigenous drones, often also in coproduction

---

[152] Baykar Makina. Bayraktar TB2, General information. Available at: https://baykartech.com/en/uav/bayraktar-tb2/ [Accessed on 19/04/2024]
[153] SIPRI arms' transfer database. Available at: https://armstransfers.sipri.org/
[154] BAYKAR. [X: BaykarTech]. Available at: https://x.com/BaykarTech (Accessed: 21/04/2024)

with Baykar. Two other big companies actively competing in today's UAVs market are Lentatek and TAI. The Turkish company Lentatek started working on its UAVs in 2005, with the launch of micro, mini and small drones, in 2009 started the project on its tactical UAV compatible with NATO's Airworthiness requirements[155], and today its best technologies are concentrated in the tactical UAV Karayel-SU, sold in 2019 to Saudi Arabia with a local production agreement.[156]

Another important and competitive company on the market is Turkish Aerospace, born in 1973 under the Ministry of Industry and Technology to reduce the country's foreign dependency. In 1984 a big manufacturing project started thanks to the joint investment between Türkiye and the US in order to supply the former with the F-16 aircrafts. In 2005 Turkish Aerospace was restructured and two other big companies merged in it: Turkish Aircraft Industries (TAI) e TUSAŞ Aerospace Industries, from which now maintains the acronym TAI in English, while in Turkish many refer to it as TUSAŞ (Türk Havacilik ve Uzay Sanayi A.S.).[157]

TAI is specialized in aerospace vehicles and is a prominent producer and seller of helicopters, aircrafts, UAVs, space systems and assembly structures.[158] In 2021 TAI has entered the top 100 arms- producing and military services companies ranking made by SIPRI, with the 84th position worldwide and an increase of revenues of +62% from 2020.[159] In 2022 another increase in revenues (+14%) has showed a further advancement of the company success on the global market[160], also due to its two best-sells UAVs Anksungur and Anka-S which are currently used in 8 countries.[161] TAI is currently

[155] Mayer, J., E., NATO STANAG 4671
[156] Egozi, A. (23/09/2022). As Saudi Arabia goes on defense investment spree, Israeli industry in a tight spot. *Breaking Defense*. Available at: https://breakingdefense.com
[157] For clarity reasons we will use the English acronym TAI. Turkish Aerospace. About us. Available at: https://www.tusas.com/en/corporate/about-us
[158] Ibidem
[159] Béraud-Sudreau, L., Liang, X., Lopes da Silva, D., Tian, N., & Scarazzato, L. (2022). The SIPRI Top 100 Arms-Producing and Military Services Companies, 2021. Available at: https://www.sipri.org/publications/2022/sipri-fact-sheets/sipri-top-100-arms-producing-and-military-services-companies-2021
[160] Béraud-Sudreau, L., Liang, X., Lopes da Silva, D., Tian, N., & Scarazzato, L. (2022). The SIPRI Top 100 Arms-Producing and Military Services Companies, 2022. Available at: https://www.sipri.org/publications/2023/sipri-fact-sheets/sipri-top-100-arms-producing-and-military-services-companies-2022
[161] IISS

producing another UAV, ANKA III, indigenously made which is completing its test flights and it said it will be on the market soon.[162]

In Table 2 there are showed the major changes in Turkish companies listed in the first 100 in the world rankings done by SIPRI in their yearly fact sheets of 2021 and 2022. In the table other two Turkish companies are included: ASELSAN and Roketsan. ASELSAN is one of the major contractors for the Turkish Armed Forces and its products include communication systems, radars, avionics, electronic warfare systems, air defence systems and targeting systems.[163] Furthermore, Roketsan has entered the ranks in 2022, the company mainly sells air, land and naval defence systems and munitions, being the only company in the list with the entirety of its revenues coming from arms.[164]

Company	Ranking 2022	Ranking 2021	Revenues change 2021-2022	Revenues change 2020-2021	Arms revenues as a % of total revenues 2022
ASELSAN	60	54	+1.2%	6%	95%
Baykar	76	100	+94%	-	95%
Turkish aerospace	83	83	+14%	62%	81%
Roketsan	100	107	+17%	-	100%

Table 3: Turkish arms companies in the top 100 arms- producing and military services companies made by SIPRI, 2021 & 2022 fact sheets. Available at: https://www.sipri.org/publications/2022/sipri-fact-sheets/sipri-top-100-arms-producing-and-military-services-companies-2021 & https://www.sipri.org/publications/2023/sipri-fact-sheets/sipri-top-100-arms-producing-and-military-services-companies-2022. Data developed by the author.

Looking at Table 2 the most outstanding data is the increase of revenues from 2021 to 2022 of Baykar. This remarkable percentage places the Turkish firm at the top of the list in terms of revenue change not just relative to other Turkish companies but also among all 100 companies on the list. The revenues of the company are still way below the top-

[162] Turkish Aerospace, (29/12/2023) [X: TUSAS_EN]. Available at: https://x.com/TUSAS_EN/status/1740752533671563578 (Accessed 21/04/2024)
[163] ASELSAN. Available at: https://www.aselsan.com/en/defence
[164] Roketsan. Available at: https://www.roketsan.com.tr/en

50 and can't be compared to those of its Americans and Chinese competitors, but seeing the niche and limited field Baykar operates in, and considering its young age, these data result noteworthy.

As anticipated, Turkish drones have experienced a relevant demand increase from their entrance in the market. Baykar's drones have been the most successful but also other companies, like TAI and ASELSAN have joined the production efforts. To better understand the extent of Turkish drones' presence in the world we can refer to the image below developed by IISS in its yearly report 2024 (Figure 2).[165] The map illustrates all countries which have bought Turkish drones since 2018, with two different legends, the one on the bottom right corner indicating which type of contract each country has developed with the company, and the one at the left side showing which drone was bought and which are the main features.

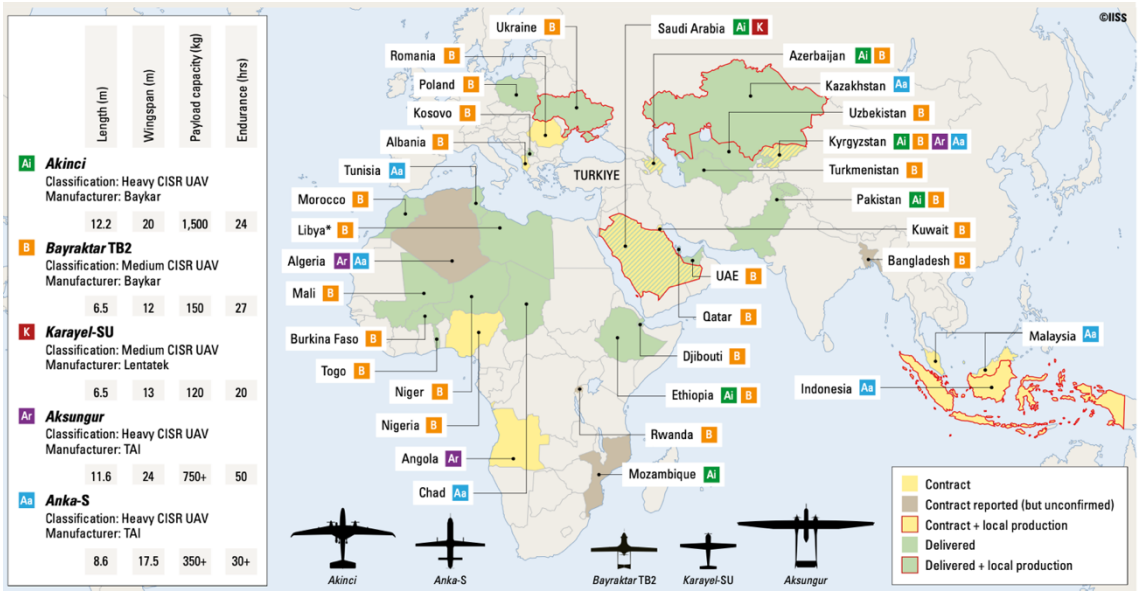


Figure 2: Turkish drones around the globe. Map taken from the IISS 2024 Military Balance. Source: https://www.iiss.org/publications/the-military-balance/

This map enables a visualization of the extension of Turkish influence in its near neighbourhood and in other regions. It's important to notice the extension of its sales in Africa. While the Caucasus region is a natural region of influence due to the geographical proximity, historical ties and economic connections, Africa has been a strategic objective for Erdoğan's administration, not only regarding those countries facing the Mediterranean

[165] IISS Military balance 2024. Available at: https://www.iiss.org/publications/the-military-balance/

Sea, but also including other central and south Africa nations. Furthermore, also the contracts with Malaysia and Indonesia result significant, especially the latter, which includes a local production agreement with TAI. Saudi Arabia has been another important and strategic partner which recently has concluded a deal with Baykar on the new drones TB3, concluding a local production program and enforcing the partnership with Türkiye.[166]

We have examined the development of Turkish-made drones in recent years, the factors that have contributed to their success internationally and the multiple deals that Turkish companies have completed. However, some studies have highlighted the dependency issues faced by Turkish companies due to the imports of strategic assets like sensors and engines.[167] This dependency unveiled weaknesses in the production chain, leading to a substantial reassessment of the true extent of Türkiye's power projection potential through the augmentation of drone export rates.

Moreover, alongside production dependencies, the economic dimension emerges as a pivotal concern. Türkiye has been undergoing a deep financial crisis with inflation rates that have been increasing constantly. Over the last year, the Turkish lira has lost 40% of its value in relation to the US dollar, while experiencing an alarming 82.6% depreciation over the past half-decade.[168] This economic downturn has created challenges for the acquisition of foreign assets, predominantly made in dollars, thereby undermining Türkiye's leverage on the global stage. The limits, however, do not finish at the economic realm. Depending on the procurement model chosen, which notably includes a significant proportion of co-production or direct acquisition, an export-oriented policy implies the necessity of the export licences from the providers of the product or the know-how. These impositions create clear boundaries to Turkish affairs and interests, of which some cases have been mentioned in the chapters before (2.3).

---

[166] Kasapoğlu, C. (04/05/2024). GÖRÜŞ- 2. Soğuk Savaş kapıdayken NATO, Türk savunma sanayisi ve Baykar. *Anadolu Ajansi*. Available at: https://www.aa.com.tr/tr/analiz/gorus-2-soguk-savas-kapidayken-nato-turk-savunma-sanayisi-ve-baykar/3209694 [Accessed 05/05/2024]

[167] Kurç, Ç. (2017)

[168] Turak, N. (04/03/2024). Turkish annual inflation soars to 67% in February. CNBC Economy. Available at: https://www.cnbc.com/2024/03/04/turkish-annual-inflation-soars-to-67percent-in-february. [Accessed on 25/04/2024]

To comprehensively understand the nexus between Turkish drone export rates and foreign policy decisions, it is necessary to analyse the data on Turkish exports and imports concerning drones and their constituent components. To this end, we use data obtained from SIPRI arms transfer database, SaSaDs annual report (available until 2022), and private companies' announcements on social platforms.

3.3.2 Methodology & data

What we decided to do in this first part of analysis is to verify these problems. Many of the research assessing this dependency were written between 2018 and 2020 and with data retrieved by SIPRI database we decided to better understand the path.

The SIPRI database is one of the most complete and specific databases, however, its extension is still conditioned by the sensibility of the information which sometimes are not totally, or partially, available due to the confidentiality of certain data. When it comes to arms and defence, States do not want all their information to be accessible and most of them are difficult to retrieve. As we acknowledge this limit, we believe that a notable study on the available data is yet doable and can be useful to better understand some dynamics.

The data was chosen carefully and developed with a precise objective in mind: visualize the trend of drones' export and strategic assets' imports from/to Türkiye. For this reason, the export data considered was that from 2018, year of first deal of Baykar, until 2023, last year with certain data available on the database. The imports trend has been calculated by the cumulative data of imports of engines and sensors from foreign countries. These two assets have showed to be an important need for Turkish industries, already in 2016 Kurç underlined the critical need for Turkish production of sub-systems, with the development and expansion of drones' production these assets remained essential, and their imports soared in coherence with the production increase.[169] This reported dependency however has been changing in the latest years, both due to autarchy objectives and structural problems. One relevant example is the already cited Canadian provision of optical sensors, widely assembled on drones, which was interrupted in 2021

[169] Bağcı, H. & Kurç, C. (2017) p. 45

due to geopolitical reasons.[170] To this crisis moment Türkiye responded efficiently, already in 2021, the Baykar CEO Selçuk Bayraktar answered to the embargo saying that Canadian optical sensor was no longer needed for Turkish drones.[171] Many were the western experts' doubts about this statement, addressing the young age of the Turkish industry and the impossibility to create similar technology domestically.[172] The main difference between the Canadian WESCAM and the Turkish prototypes was the considerable weight the last has, which made them too heavy to by assembled on drones. Only two years later, in 2023, however major developments were traced in the development of indigenous sensors and in February 2024 Baykar announced the successful armament of Akinci with an ASELSAN made optical camera[173], ASELFIR-500, the new electro-optical reconnaissance, surveillance and targeting system, weights only 3 kilograms more than the Canadian WESCAM.[174]

This example is good evidence of a capacity of substitution, necessary to decrease dependency and gain power. What we decided to see is if this trend results in data or there are some exceptional and isolated cases like the one just explained.

3.3.3 Results

With the aggregation of the data available on drone's exports and on engines and sensors' imports we built a graph to visualize the trends of the two variables. In the graph below (Graph 5) the red line shows the change in Turkish imports of engines and sensors from 2017 to 2023, while the blue line shows the same trend in the export of drones. The data

[170] Scherer, S., & Shakil, I. (29 January 2024). Canada drops weapons export controls to Turkey, including drone technology. Reuters. Available at: https://www.reuters.com/world/canada-drops-weapons-export-controls-turkey-including-drone-technology-2024-01-29/

[171] Selcuk Bayraktar (13 April 2021). [X: @seluck] Available at: https://twitter.com/Selcuk/status/1382006500852441090

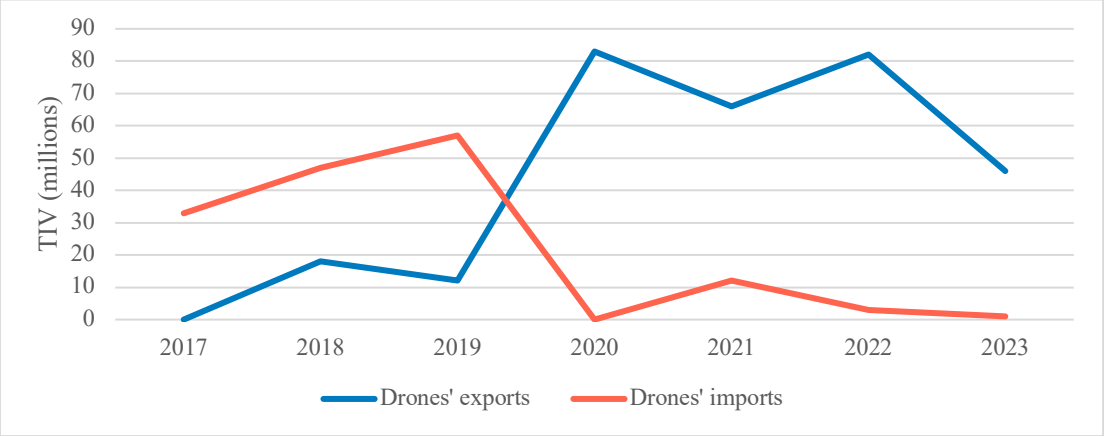
[172] Sevunts, L. (21 April 2021). Turkey claims it no longer needs Canadian military drone tech. Available at: https://www.cbc.ca/news/politics/turkey-drone-armenian-nagorno-karabakh-1.5996570 [Accessed on 28/04/2024]

[173] Baykar, (24 February 2024). Türkiye's new, advanced drone camera undergoes 1st test. Available at: https://baykartech.com/en/press/turkiyes-new-advanced-drone-camera-undergoes-1st-test/ [Accessed on 28/04/2024]

[174] Information about the features of the two sensors can be found at the following links: WESCAM, p. 8, https://assets-global.website-files.com/63e066081ef50cb16a3f4157/63e066081ef50c27e33f41f4_TurkeyWESCAMReportSept.2020.pdf ; ASELFIR-500 https://wwwcdn.aselsan.com/api/file/ASELFLIR500_ENG.pdf

is calculated with the Trend Indicator Value (TIV) expressed in millions used by SIPRI as explained in the first paragraph (3.1).

Türkiye's drones' exports and imports rates from 2017 to 2023



Graph 5: Türkiye's drones' exports and imports rates from 2017 to 2023. Source: SIPRI arms transfer database Available at: https://armstransfers.sipri.org/ArmsTransfer/ Data developed by the author.

The graph shows that for the first three years considered, 2017-2019, exports and imports were following a positive dependent path, with the imports being much higher than exports. In 2020, two phenomena are important, first we see a sudden decrease on the imports. This data can be mainly explained by the Covid-19 crisis that has had a relevant impact on markets and especially on imports, which dropped due to the government investments in health and crisis management rather than defence. This data is also verified by the SaSaD yearly report in 2020 which reported a 30% decrease on imports in the sector, mainly due to the fall of production and the covid-19 crisis.[175]

In the same year the peak of exports is reached, and the trend of the two data change, while before they were following an almost linear and positive correlated increase, from 2020 exports stayed high while imports progressively decreased, singing a negative relation between the two variables.

One last consideration we believe its valuable to add on the imports' procurement factor is that since the imports mainly consist of dual-use components, the imports register might be affected. Components like GPS, which have clear civilian functions, are difficult to address to stop the production of drones since such a limitation would be a burden on

[175] SaSaD yearly report 2020, p. 15. Available at: https://www.sasad.org.tr/sasad-sektor-performans-raporu-2020

companies and would create diplomatic tensions.[176] Therefore, although it's acknowledged the efficiency of Turkish industry in develop indigenous products to reduce dependency, some less vulnerable assets are still imported and need by Türkiye for its own "indigenous" production. While this asymmetry of information is acknowledged, we believe that for the scope of our analysis, the data considered is valuable to understand the effects of drones on foreign policy decisions, as we will deeper analyse in the next paragraphs.

3.3.4 Findings

Our examination of the Turkish defence industry, particularly focusing on the realm of UAVs, has unveiled a compelling narrative of shifting dynamics. Over the recent years, we've witnessed a remarkable uptick in UAV exports, indicative of a rising demand from international markets. This surge in exports has catalysed an expansion in Türkiye's production capacities, propelling its defence industry onto the global stage with renewed competitiveness.

Conversely, our analysis revealed a gradual decline in the imports of selected assets since the year 2020, with import figures failing to reclaim the levels seen prior to 2019. This downward trend underscores Türkiye's diminishing reliance on externally sourced assets, signalling a trend towards self-sufficiency and a renewed emphasis on indigenous innovation and production capabilities in the drone sector. Türkiye is not only asserting itself as a competitive player in the international UAVs' market but also reshaping established paradigms by reducing dependency on external sources and fostering a more self-reliant defence ecosystem.

Many in recent years have praised Turkish industrial capabilities in UAVs sector, but an analysis of the data available was still absent in the literature. It is imperative to acknowledge the inherent limitations and challenges associated within the research. The complex and often sensitive nature of defence-related data introduces a degree of uncertainty into our analysis, despite our best efforts to ensure accuracy and reliability. Moreover, Türkiye's historical tendency towards opacity and limited transparency in

[176] Feldstein, S. (2023). How Global Demand for Military Drones is Transforming International Security and Geopolitics. *Georgetown Journal of International Affairs 24*(2), 146-155

strategic domains adds another layer of complexity. Our findings, while offering valuable insights into trends within the defence and drone market, must be interpreted with caution and within the context of these limitations.

Notwithstanding, we believe that the data amassed provides a foundational framework upon which to formulate hypotheses and conduct further research. As such, our findings offer valuable insights into the evolving landscape of Türkiye's defence industry and its implications for broader geopolitical dynamics. This research has yielded rich empirical findings which will be essential for the final analysis in the next paragraphs.

3.4 Foreign policy

3.4.1 Description

In this final section of the research, we seek to elucidate the relationship between changes in foreign policy and the rise in drone exports in Türkiye. In the previous paragraph we went into greater detail about the characteristics of Turkish drones and their exports, concluding that, despite the government's narrative downplaying the efficiency issues and potential procurement issues, UAVs have been playing a greater role in the definition of Turkish power with a reduction of its dependency in certain sectors, resulting in the creation of an almost entirely indigenous weaponry that allows it to compete with the top exporters on a global level.

Numerous variables impact a nation's foreign policy, including the international system, whether a country operates in a bipolar, unipolar, or multipolar setting, the degree of strength and influence the nation has both within its region and globally, and its own internal dynamics and goals. Putnam reveals the intricacy of policymaking by describing in his theory the inherent connection of the two levels: domestic and international.[177] We use this idea as an umbrella and a solid foundation upon which to argue that foreign policy cannot be explained by favouring one variable over another. In light of this, we contend that by conducting research on the relationships between variables we gain a greater understanding of their significance and can evaluate how they influence one another.

From the beginning of the century, and with the start of the AKP administration, Türkiye has engaged in an increasingly more active foreign policy with a distinctive

[177] Putnam, R. D. (1988), cit.

change of means from 2008 onwards. The role as emerging middle power has been achieved also due to the domestic ambitions of Erdoğan's administration, with foreign policy tools been used to maintain and enhance the power of the party. One example is the publicization of drones' achievements and efficiency as a regime survival strategy, by directly linking them to national security issues and national pride.[178] In this case drones have been used to serve internal power dynamics while employing them mainly in international scenarios.

The promotion of a more assertive and active policy in global affairs has been a major trait of Turkish foreign policy in the last decade, aiming to a leading and influential role for the country. In the wide array of means and variables that have been influencing these ambitions, drones have played a major role and have been stimulating the attention of many researchers and journalists. The visibility that the mean of drones' guarantee is not to minimize. While diplomatic instruments are often quite and private, and economic mediums sometimes too complex and long term related, the military channel has been used as a balanced synthesis of presence, visibility and power projection that has captured the attention of leaders, newspapers, and civil society, benefiting the ambitions of Türkiye.

In this paragraph we will take two strategic cases where Turkish presence is being reported and debated and where the role of drones has been central in the narrative. The two cases chosen are the Turkish role in the war in Ukraine and the Turkish growing military presence in Africa. With these two examples we aim to understand the role drones have played in major issues of contemporary global affairs affecting and determining choices in foreign policy.

3.4.2 Turkish role in Ukraine

The Russian invasion of Ukraine started in February 2022 is seen by many as a critical juncture of the twenty-first century, undermining the inviolability of the territorial

[178] Soyaltin-Colella D. & Demiryol T. (2023) Unusual middle power activism and regime survival: Turkey's drone warfare and its regime-boosting effects, *Third World Quarterly*, 44:4, 724-743

integrity of a sovereign state, one of the central tenants of the international system, and leading to the first war with global involvement in the European continent since 1945.[179]

This shock provoking event has added to many other in the century, such as the 2008 financial crisis, the Arab springs and the Covid pandemic, which will lead to the inevitable change of the global order. What will be the sort of Ukraine, Russia and Europe will define the next structure of the international system and, while this is still uncertain to define, current decisions and actions taken by countries will shape this future order. Türkiye has had a unique role in the Russian-Ukrainian war, proposing itself as a balancer and mediator between the two parts and holding tight relationships with both countries.

Before the invasion, Türkiye had already good trade relations with Ukraine, with a stable growth of trade and diplomatic relations. In 2018 Ukraine was the first buyer of the Baykar's TB2 UAV, and the defence trade relations between the two countries progressively grew in years.[180] As the war started, Erdoğan rapidly condemned the invasion and expressed his support towards Ukraine.[181]

Bayraktar TB2s proved strategic for the Ukrainian resistance in the first weeks of the conflict, enabling not only powerful resistance and direct attacks to the adversary, but also important ISR information.[182]

Although drones have played an important role on the battlefield, the international recognition of their relevance has had a greater impact on their popularity, acclaimed by Ukrainians[183] and foreign prominent figures, as Aaron Stein, director of research at the US Foreign Policy Research Institute, who compared them to a Toyota Corolla stating "It doesn't do everything that your high-end sports car does, but it does 80% of that".[184] This international recognition has surely had a positive impact on Baykar's deals and Turkish

---

[179] Kutlay, M. & Öniş, Z. (2024) A Critical Juncture: Russia, Ukraine and the Global South, *Survival*, 66:2, 19-36

[180] Rossiter, A., & Cannon, B. J. (2022) p. 2019-2021

[181] Osterlund, P. B. (24/02/2022). Erdogan: Russia attack on Ukraine 'heavy blow' to regional peace. *Al Jazeera*. Available at: https://www.aljazeera.com/news/2022/2/24/erdogan-russia-attack-ukraine-heavy-blow-regional-peace [Accessed on 22/02/2024]

[182] Rossiter, A., & Cannon, B. J. (2022) p. 2019-2021

[183] Many are the evidence of Ukrainians, especially in the military, acclaiming Turkish drones Bayraktar TB2. One of the most famous is this song: Yeni Şafak (24/05/2022). Ukrayna ordusu Bayraktar için özel klip çekti. *You Tube*. Available at: https://youtu.be/JGwUvSpcv8c?si=7hNDLxQOZv_Gm8vk

[184] Wever, M. (17/03/2022). "What Weapons have Other Countries Supplied to Ukraine?" *The Guardian.* Available at: https://www.theguardian.com/world/2022/mar/17/what-weapons-have-other-countries-supplied-to-ukraine [Accessed on: 13/05/2024]

defence industry reputation, but it has also been a mean for Türkiye to pursue a multi-alignment strategy resulting, in this case, of bilateral relations with the two countries in conflict.

Indeed, also with Russia trade relations have been increasing. In the energy sector, of strategic importance for both countries, Türkiye has implemented its cooperation with Russia from 2022 onwards, also due to the lower price of Russian fossil fuels after US and European sanctions, and Türkiye has commissioned its first nuclear power plant to the Russian state atomic energy corporation, Rosatom.[185] Cooperation has been pursued also in the defence sector, with Erdoğan's decision in 2019 to acquire the S-400 defence system from Russia, leading to diplomatic and trade consequences with the US.

Turkish strategic sell of drones to Ukraine has made possible the continuation of bilateral relations also with Russia and Erdoğan became one of the few world leaders being able to keep dialogue with both President Putin and President Zelensky. Türkiye's cooperation with Ukraine can also be seen, from an historical point of view, as the result of the persistent competition with Russia: from before the war of independence, to the most contemporary conflicts, where the two countries have actively supported opposite parts, Russia and Türkiye have engaged in indirect confrontations in multiple battlefields (ex. Libya, Syria, Nagorno Karabakh) seeking influence in the regions. Erdoğan and Putin, however, continue to have diplomatic relations rooted in their shared authoritarian style of governance as well as their pro-global south approach.

This multi-alignment foreign policy strategy is part of a bigger picture where ambitions, ideology and many other variables comes into play. However, the defence market variable has gained the visibility and acclamation needed in order to put the country on a strategic international position. In the context of the conflict, Türkiye has been an active actor in initiating dialogue between the two parts and putting itself as a mediator. In March 2022 a first attempt was made hosting peace dialogue in Antalya where the three parts met to discuss a first agreement, which however was not reached.[186]

---

[185] Nuclear News. (11/03/2024). "Commissioning work started at Turkey's first nuclear plant". *Nuclear Newswire, Power & Operations*. Available at: https://www.ans.org/news/article-5935/commissioning-work-started-atturkeys-first-nuclear-plant/ [Accessed on: 13/05/2024]

[186] Aljazeera (20/03/2022). Russia, Ukraine 'close to agreement' in negotiations, says Türkiye. Available at: https://www.aljazeera.com/news/2022/3/20/turkey-says-russia-ukraine-close-to-agreement [Accessed on: 02/05/2024]

Furthermore, the two parts attended the Antalya Diplomacy Forums of 2023 and 2024without any progress being made but showing the will of meet in such a context.[187]

We therefore believe that the variable of drones has been essential for Türkiye, not only increasing the relevance and status of its own defence technologies, but also positioning the county in a balanced standpoint between the two states in conflict and enabling a reinforcement of the Turkish membership in NATO.

3.4.3 Turkish role in Africa

The second case chosen for our analysis is the Turkish presence in Africa, which has increased in the last decade especially, but not only, with its arms exports. The African continent is considered one of the most strategic areas in the struggle for power through influence, it has been at the centre of diplomatic, governmental, and international discussions for years and is still one of the most active fields of competitions between countries.

Drones, especially after their use in Ukraine, have shown to be a market of interest for many African governments which have increased their deals with many foreign defence firms. The entrance in the Africa arms' deals market is not easy for new suppliers, between 2009 and 2019 the United States were the first exporter to Africa, with a 33% of total exports to the continent, followed by Russia (30%), the EU (23%) and China (8%), leaving just a 6% of the market for all the other suppliers.[188]

Türkiye has been active in promoting its weaponry in the African market, offering a solution which differs from the main competitors. Firstly, its weapons have a better efficiency-cost relation than the Chinese offers: Turkish weapons are built in an industry which was born and was developed in the NATO framework, and which follows its standard.[189] Although Turkish manufacturers do not reach the level of its US or EU counterparts, African countries are rarely searching for the last generation product, which have significant production, or procurement, and adoption costs that are unreachable for

[187] Rfi, (01/03/2024). Lavrov in Turkey as Erdoğan seeks Ukraine peace breakthrough. *Radio France Internationale (RFI)*. Available at: https://www.rfi.fr/en/international-news/20240301-lavrov-in-turkey-as-erdogan-seeks-ukraine-peace-breakthrough [Accessed on: 03/05/2024]
[188] Department of State, (12/2021). World Military Expenditures and Arms Transfers, The U.S. Department of State, WMEAT 2021
[189] Kurç, C. (21 Jul 2023), p. 11

developing countries.[190] Türkiye therefore offers the in-between deal with lower prices but high and proven efficiency products.

Secondly, Türkiye offers a "third way" solution to the restrictions imposed on sales done by the US and EU, notably end-use conditions[191], or by China, which requires the support for the One-China policy.[192] This strategy, known as "no-strings attached" policy, was adopted by the AKP administration and doesn't only refer to arms export but also to the wider Turkish external relations, which entails no political conditionalities to aid or market deals done with foreign partners.

Erdoğan has been clever in using this approach also towards Russia, from the start of the war Türkiye has been sending economic and military aid to Ukraine, especially with its private drones' company Baykar. Although it's evident the connection of the company and the government, particularly visible when looking at the percentage of governmental investments and the private links between the president's family and the Bayraktar family[193], Erdoğan's has been able to continue its relations with Russia, second economic partner for Türkiye and major partner in the energy market and keep its credibility in the support for Ukraine.[194]

This policy has attracted many African countries and has favoured Turkish sales; however, some experts have expressed concerns toward this strategy, underling how un-restricted foreign policy can cause troubles with conflicting countries.[195] For a country were young industries with high demand have to sustain the fastness of the market and of their competitors, and in a framework of heavy economic crisis, the durability of deals is a central issue for the sustainability of production, and the low trustworthiness of the partner countries creates potential risks for the industries.

---

[190] Gilli, A. & Gilli, M. (2016) The Diffusion of Drone Warfare? Industrial, Organizational, and Infrastructural Constraints, *Security Studies*, 25:1, 50-84

[191] Shapiro, A. J. (2012). A new era for US security assistance. *The Washington Quarterly*, 35(4), 23-35. P. 30

[192] Bayar, M. & Arpa, E. (2020). South—South Cooperation in Africa: The Niger-Turkey Case, *Journal of Global South Studies*, 37(1), p. 37

[193] The reference is directed to the CTO (Chief Technical Officer) of Baykar Makina, Selçuk Bayraktar, brother of the CEO Haluk Bayraktar, and husband of President's Erdoğan's daughter, Sümeyye Erdoğan.

[194] Glinski, S. (06/03/2023). Turkey's Balancing Act Between Putin and the West. *Foreign Policy*. Available at: https://foreignpolicy.com/2023/03/06/turkey-elections-russia-erdogan-putin-nato/ [Accessed on: 19/05/2024]

[195] Kurç, C. (21 Jul 2023), p. 13

The increase in Turkish arms sales is also determined by the multi-track diplomacy sustained in Africa, which entails diplomatic and cultural relations with the countries partner in the continent.[196] The African continent has been at the centre of the Turkish soft foreign policies from the 90s, with the proliferation of embassies and the expansion of Turkish Airlines' flight in the continent Ankara has established direct connections with many African capitals.[197] With the start of the "Year of Africa" agenda in 2005 Erdoğan has proposed Türkiye has a stable and reliable partner for commerce, investment and development, free trade agreements have been singed with Egypt, Morocco, Tunisia, Mauritius and Sudan and many scholarships have been offered to get African students to Turkish universities. This involvement has been essential for Turkish exports and increase of power in the region. Furthermore, on the military side, Türkiye opened 37 military offices in the continent, expanding its influence and control in many countries. Another tool Türkiye uses to get closer to the African continent is the pro-Global South narrative. President Erdoğan multiple times has used the slogan *"The world is bigger than five"* to address the unfair power given to the permanent members of the United Nations' Security Council.[198] Another relevant sing of this intention of placing Türkiye on the Global South/African side is showed in another sentence pillar of many of Erdoğan's speeches *"African solutions to African problems"*, portraying Türkiye as a reliable partner who respects African countries and peoples' needs and interests, contrary to the United States and China.[199]

Although in this contextualization the drone variable might seem to lose weight in the function of power, we believe that UAVs have played, and will play, a relevant role in the increase of influence of Türkiye. The increase of demand of them in Africa in 2021 has been modestly affected by the international relevance that have produced especially in their employment in Ukraine, therefore proving the positive impacts of the business

[196] Ibidem, p. 12
[197] Ibidem
[198] Özdemir, I. (30/12/2017). 'Dünya 5'ten büyüktür' şarkı oldu. *Anadolu Ajansi*. Available at: https://www.aa.com.tr/tr/turkiye/dunya-5ten-buyuktur-sarki-oldu/1018538
[199] Karaaslan, Y. S., Usul, A. S. & Altaş, M. (19/12/2021). Cumhurbaşkanı Erdoğan, Afrikalı gençlerle bir araya geldi. *Anadolu Ajansi*. Available at: https://www.aa.com.tr/tr/gundem/cumhurbaskani-erdogan-afrikali-genclerle-bir-araya-geldi/2451765

choices and strategies of the companies, and of the government. Furthermore, as already mentioned, drones have an important impact based on their visibility.

The international attention put on them is higher than other weapons, considered more traditional, therefore the visibility impact that UAVs have both for Türkiye, which is increasingly seen as a competitive seller, and of African countries, that seek more relevance and power has been strategic for both parties, ends in a win-win game. The attention put also on the increasing influence of Türkiye in Africa and the strategic role of drones in this is also evidence of their relevance and importance for the global understanding of Turkish position in the international distribution of power.

Conclusions

In this thesis we have analysed the relation of drones' exports and foreign policy in Türkiye, how the first has been an influential variable in the pursue of Turkish ambitions and how it has been used for the redefinition of its role in the global stage.

With the analysis of emerging middle powers and their behaviour in different sets of distribution of power we aimed to create a comprehensive framework in which position Turkish foreign policy decisions, going deeper in the change of the country's policies in through history. Coherently, the analysis of defence industry development and the choice of specialization in nice sectors aimed to contextualize Türkiye's fast defence industry evolution and its success in the UAV's sector, which is considered to be a pivotal variable in the foreign policy decisions of the last years.

Through the analysis of the broader Turkish defence industry, we investigated into its organization and founding system, and witnessed the overall partial improvement that reflects an intention in lowering the country's dependency on foreign suppliers. Afterwards, we analysed the level of Turkish drones' exports compared to the level of Turkish imports of assets necessary to the production of drones. The data analysis, made possible by the SIPRI database of arms transfer, has revealed an increase of production with a relative decrease of imports of the mentioned assets. According to our results there is improvement in Turkish defence industry, consisting in a partial decrease of its imports on assets necessary for drones' production, therefore increasing the indigeneity of its production. The limit of our analysis should be overcome in future research in order to have a broader and more complete understanding of the industry's trends, therefore further investigations should be made on Turkish military complexes. However, coherently with the scope of this thesis, we can confidently say that the data and results obtain show the intentions of Turkish government to decrease dependency and increase strategic use of drones for its foreign policy ambitions.

In the analysis of the foreign policy, we looked at two relevant case studies that allowed us to analyse the impact of drones on a policy level. The Ukraine case provides an example of current crisis in which all countries have been asked to take a stand. In this context, a clear difference between the US and its close allies and the rest of the world has showed: while the former have been severe and uncontestably critical towards Russia,

imposing sanctions and interrupting all relations, the others have condemned the invasion but have stressed the presence of faults from the West, continuing their normal relations with Moscow. In this dichotomy, Türkiye has cleverly positioned itself pursuing its own interests, using drones and aid to support Ukraine and increasing their partnerships, while keeping friendly relations with Russia taking advantage of its isolation to foster its energy's relations, while not receiving heavy critiques from its NATO allies.

In the African case, conversely, we saw drones playing an important role in a wider set of policy operations, finalised to gain influence in the continent and distinguishing itself from the most important competitors, notably USA and China, proposing a "third-way solution". In this long-term strategy, we argue that UAVs have been an accelerating variable and have increased the visibility of the actions pursued by Türkiye in the continent. These examples demonstrate that Türkiye's use of drones extends beyond mere military applications or economic gains. Instead, drones serve as versatile instruments intersecting with cultural diplomacy, humanitarian aid, political influence, and broader strategic goals. This multifaceted approach aligns with the emerging concept of drone diplomacy, a term increasingly associated with Türkiye's foreign policy in recent years. Unlike traditional competitors like the USA, China, Russia, and Iran, Türkiye's drone diplomacy uniquely leverages UAVs to enhance its international standing and pursue complex diplomatic objectives.

We define "drone diplomacy" as the use of unmanned aerial vehicles (UAVs) by a country to conduct international relations and pursue foreign policy objectives. This practice encompasses a range of activities including intelligence gathering, surveillance, humanitarian aid, military operations, and the transfer of drone technology to allies and partners. It reflects state behaviour in pursuing national interests and leverages both soft and hard power dynamics within the geopolitical landscape. However, the definition of "drone diplomacy" should be taken into deeper considerations in further research, analysing in more detail its characteristics, its effects on international and domestic politics and its usages.

Furthermore, the strategic use of drone diplomacy might also serve domestic political purposes for the AKP leadership. By showcasing technological prowess and successful foreign policy initiatives, the AKP can bolster national pride and strengthen its political position at home. The visibility of drone achievements in international media can enhance

the party's image, presenting it as a leader in innovative defence technology and strategic diplomacy. This domestic boost can translate into increased political capital and public support, reinforcing the AKP's power base within Türkiye. Given the significant implications of drone diplomacy on both international and domestic fronts, further research should focus on precisely on the domestic political discourse in Türkiye, as we believe much is still to discover on the domestic intentions to leverage on drones to amplify security issues and concerns, and how this securitization favours the current government and its hold on power.

Bibliography

Acikmese, S. A., & Triantaphyllou, D. (2012). The NATO–EU–Turkey trilogy: the impact of the Cyprus conundrum. *Southeast European and Black Sea Studies*, *12*(4), 555-573.

Africa Intelligence (07/05/2021). Morocco: Canada bends rules for drone-maker Baykar and L3 Harris. Available at: https://www.africaintelligence.com/

Aljazeera (20/03/2022). Russia, Ukraine 'close to agreement' in negotiations, says Türkiye. Available at: https://www.aljazeera.com/news/2022/3/20/turkey-says-russia-ukraine-close-to-agreement [Accessed on: 02/05/2024]

ASELSAN. Available at: https://www.aselsan.com/en/defence

Aydın-Düzgit, S., & Tocci, N. (2015). *Turkey and the European Union*. London and New York: Palgrave Macmillan

Bağcı, H., & Kurç, Ç. (2017). Turkey's strategic choice: buy or make weapons?. *Defence Studies*, *17*(1), 38-62

Bayar, M. & Arpa, E. (2020). South—South Cooperation in Africa: The Niger-Turkey Case, *Journal of Global South Studies*, 37(1), p. 37

Baykar Makina. Bayraktar TB2, General information. Available at: https://baykartech.com/en/uav/bayraktar-tb2/ [Accessed on 19/04/2024]

Baykar Makina, (23 April 2021). Turkey's akinci ucav successfully hits targets with roketsan munitions. Available at: https://www.baykartech.com/tr/press/turkeys-akinci-ucav-successfully-hits-targets-with/

Baykar Makina (04 April 2023). "Bayraktar TB2 SİHA ihracatı, Baykar'ı "küresel savunma ligine" taşıdı". Available at: https://www.baykartech.com/tr/haberler/bayraktar-tb2-siha-ihracati-baykari-kuresel-savunma-ligine-tasidi/#:~:text=Bayraktar%20TB2%20SİHA%20için%2032,güvenliğine%20katkı%20sağladığını%20ifade%20etti

Baykar Makina, (25 May 2023). Türkiye's Baykar inks deal to replace embargoed drone electro-optic systems. Available at: https://baykartech.com/tr/press/turkiyes-baykar-inks-deal-to-replace-embargoed-drone-electro-optic-systems/

Baykar Makina (22 December 2023). Türkiye's new combat drone completes endurance flight test. Available at: https://baykartech.com/en/press

BAYKAR. [X: BaykarTech]. Available at: https://x.com/BaykarTech (Accessed: 21/04/2024)

Bakir, N. (2022). Aspiration and Activism: Middle Power Behavior During International Power Shifts.

Bastian, J. (2024). *Turkey: An emerging global arms exporter. Growing competitiveness and strategic recalibration of the Turkish defense industry* (No. 6/2024). SWP Comment

Béraud-Sudreau, L., Da Silva, D. L., Kuimova, A., & Wezeman, P. D. (2020). SIPRI Insights on Peace and Security-EMERGING SUPPLIERS IN THE GLOBAL ARMS TRADE

Béraud-Sudreau, L., Liang, X., Lopes da Silva, D., Tian, N., & Scarazzato, L. (2022). The SIPRI Top 100 Arms-Producing and Military Services Companies, 2021. Available at: https://www.sipri.org/publications/2022/sipri-fact-sheets/sipri-top-100-arms-producing-and-military-services-companies-2021

Béraud-Sudreau, L., Liang, X., Lopes da Silva, D., Tian, N., & Scarazzato, L. (2023). The SIPRI Top 100 Arms-Producing and Military Services Companies, 2022. Available at: https://www.sipri.org/publications/2023/sipri-fact-sheets/sipri-top-100-arms-producing-and-military-services-companies-2022

Bekdil, B. E. (February 4 2022). Turkey and Ukraine to coproduce TB2 drones. *Defense news*. Available at: https://www.defensenews.com

Bilgen, H. (2010). Competitiveness of defense industry in turkey. *International Journal of Economics and Finance Studies*, *2*(1), 63-70

Borchert, H., Schütz, T., & Verbovszky, J. (2021). Beware the Hype. What Military Conflicts in Ukraine, Syria, Libya, and Nagorno-Karabakh (Don't) Tell Us About the Future of War, Hamburg, *Defense AI Observatory*

Brooks, S. G., & Wohlforth, W. C. (2023). The Myth of Multipolarity: American Power's Staying Power. *Foreign Aff.*, *102*, 76

Brunstetter, D., & Braun, M. (2011). The implications of drones on the just war tradition. *Ethics & International Affairs, 25(3*), 337-358

Calcara, A., Gilli, A., Gilli, M., Marchetti, R., & Zaccagnini, I. (2022). Why drones have not revolutionized war: The enduring hider-finder competition in air warfare. *International Security, 46(4*), 130-171

Chen, X., Zhao, R. L., Zhang, Z. K., & Zhao, J. (2016). Network-based study on the relationship between arms exports and foreign policies. *Physica A: Statistical Mechanics and Its Applications*, *444*, 194-204

Çiftçi, A. B. (2022). Using interstate arms sales as a foreign policy instrument (Master's thesis, Middle East Technical University).

Cooper, A. F., Higgott, R. A., & Nossal, K. R. (1993). Relocating middle powers: Australia and Canada in a changing world order (Vol. 6). *Ubc Press*

Dahmani, F., & Samba, L., (4 September 2020). Turkey's push to win over the Maghreb: The gateway to Africa. *The Africa Report*. Available at: https://www.theafricareport.com/40438/turkeys-push-to-win-over-the-maghreb-the-gateway-to-africa/

Department of State, (12/2021). World Military Expenditures and Arms Transfers, The U.S. Department of State, WMEAT 2021

Dixon R., (11 November 2020). Azerbaijan's drones owned the battlefield in Nagorno-Karabakh — and showed future of warfare. *The Washington Post*. Available at: https://www.washingtonpost.com

Edström, H., & Westberg, J. (2020). The defense strategies of middle powers: Competing for security, influence and status in an era of unipolar demise. *Comparative Strategy*, *39*(2), 171-190

Egozi, A. (23/09/2022). As Saudi Arabia goes on defense investment spree, Israeli industry in a tight spot. *Breaking Defense*. Available at: https://breakingdefense.com

Evans, D., (28 September 2020). Turkey deploying Syrian fighters to help ally Azerbaijan, two fighters say. *Reuters*. Available at: https://www.reuters.com/

Fukuyama, F. (2021). Droning on in the Middle East. *American Purpose, 5.*

Fajarini, V. I., & Anam, M. Z. (2022, March). Turkey Involvement in Libyan Civil War Under the Government of Recep Tayyip Erdoğan 2019-2020. In *International Conference on Public Organization (ICONPO 2021)* (pp. 461-472). Atlantis Press.

Frappi, C. (2018). The Russo-Turkish Entente: A Tactical Embrace Along Strategic and Geopolitical Convergences. *Turkey: To-wards a Eurasian Shift? ISPI*, pp. 45–71 URL: https://www.ispionline.it/sites/defa-ult/files/pubblicazioni/turkey_report_.pdf

Gilli, A. & Gilli, M. (2016). The Diffusion of Drone Warfare? Industrial, Organizational, and Infrastructural Constraints, *Security Studies, 25*, 50-84

Glinski, S. (06/03/2023). Turkey's Balancing Act Between Putin and the West. *Foreign Policy*. Available at: https://foreignpolicy.com/2023/03/06/turkey-elections-russia-erdogan-putin-nato/ [Accessed on: 19/05/2024]

Gosselin-Malo, E. (03/11/2021). Turkey's modern way of doing foreign policy: drone diplomacy. *Aspenia: international analysis and commentary.* Available at: https://aspeniaonline.it/turkeys-modern-way-of-doing-foreign-policy-drone-diplomacy/

Gupta, S. G., Ghonge, D. M., & Jawandhiya, P. M. (2013). Review of unmanned aircraft system (UAS). *International Journal of Advanced Research in Computer Engineering & Technology (IJARCET) Volume*, *2*

Hatipoglu, E., & Palmer, G. (2016). Contextualizing change in Turkish foreign policy: the promise of the 'two-good' theory. *Cambridge Review of International Affairs*, *29*(1), 231-250

Holbraad, C. (1971). The role of middle powers. *Cooperation and Conflict*, 6(2), 77-90

Hull, A. W., Markov, D. R., Zaloga, S. J., & Foss, C. F. (2017). Changing International Arms Market: Implications for the Department of Defense (p. 0254).

Hüsnü, Ö. (2021). The Foundation and Development of Turkey's Defense Industry in the Context of National Security Strategy. *PERCEPTIONS: Journal of International Affairs, 26(2*), 216-240

Hwang, W. J., & Song, S. H. (2022). The extension of Turkish influence and the use of drones. *Comparative Strategy, 41(5),* 439-458

International Crisis Group (20/12/2023). Türkiye's Growing Drone Exports. Available at: https://www.crisisgroup.org/europe-central-asia/western-europemediterranean/turkiye/turkiyes-growing-drone-exports [Accessed on February 23 2024]

International Institute for Strategic Studies, The Military Balance 2024

International Monetary Fund, October 2023, Country Data: Türkiye. Available at: https://www.imf.org/en/Countries/TUR

Ikenberry, G. J. (2014). The illusion of geopolitics: The enduring power of the liberal order. *Foreign Aff.*, *93*, 80

Jain, P. (2018). The emerging significance of Indo-Pacific: Japan, China, US and the regional power shift. *East Asian Policy, 10(04),* 24-36

Jordaan, E. (2003). The concept of a middle power in international relations: distinguishing between emerging and traditional middle powers. *Politikon*, *30*(1), 165-181

Kalaycıoglu, E. (2005). Turkish Dynamics, bridge across troubled lands. *New York, N.Y, USA: Palgrave Macmillan*

Karaaslan, Y. S., Usul, A. S. & Altaş, M. (19/12/2021). Cumhurbaşkanı Erdoğan, Afrikalı gençlerle bir araya geldi. *Anadolu Ajansi*. Available at: https://www.aa.com.tr/tr/gundem/cumhurbaskani-erdogan-afrikali-genclerle-bir-araya-geldi/2451765

Kasapoğlu, C. (2020). Turkey's Burgeoning Defense Technological and Industrial Base and Expeditionary Military Policy. *Insight Turkey, 22(3),* 115-130

Kasapoğlu, C. (04/05/2024). GÖRÜŞ- 2. Soğuk Savaş kapıdayken NATO, Türk savunma sanayisi ve Baykar. *Anadolu Ajansi*. Available at: https://www.aa.com.tr/tr/analiz/gorus-2-soguk-savas-kapidayken-nato-turk-savunma-sanayisi-ve-baykar/3209694 [Accessed 05/05/2024]

Keane, J. F., & Carr, S. S. (2013). A brief history of early unmanned aircraft. *Johns Hopkins APL technical digest*, *32*(3), 558-571

Kinik, H., & Çelik, S. (2021). The Role of Turkish Drones in Azerbaijan's Increasing Military Effectiveness. *Insight Turkey*, *23*(4), 169-192

Kreps, S., & Zenko, M. (2014). The next drone wars; preparing for proliferation. *Foreign Aff., 93*, 68

Kurç, Ç. (2017). Between defence autarky and dependency: the dynamics of Turkish defence industrialization. *Defence Studies*, *17*(3), 260-281

Kurç, C., & Sazak, S. C. (2017). Turkey's Potemkin Defense Industry. *Defense One, Retrieved from: http://www. defenseone. com/ideas/2017/08/turkeys-potemkin-defense-industry/140235*, *11*, 2018

Kurç, Ç. (2023). No Strings Attached: Understanding Turkey's Arms Exports to Africa. *Journal of Balkan and Near Eastern Studies*, 1-18

Kutlay, M., & Öniş, Z. (2021). Understanding oscillations in Turkish foreign policy: pathways to unusual middle power activism. *Third World Quarterly*, *42*(12), 3051-3069

Kutlay, M. & Öniş, Z. (2024) A Critical Juncture: Russia, Ukraine and the Global South, *Survival*, 66:2, 19-36

Lin-Greeberg, E. (20/12/2022). The Dawn of Drone Diplomacy: Unmanned Vehicles Are Upending the Arms Trade and the Balance of Power. *Foreign affairs*. Available at: https://www.foreignaffairs.com/ukraine/dawn-drone-diplomacy?check_logged_in=1&utm_medium=promo_email&utm_source=lo_flows&utm_campaign=registered_user_welcome&utm_term=email_1&utm_content=20240530

Magid, P. (07/02/2024). Turkey's drone maker Baykar begins to build plant in Ukraine. *Reuters*. Available at: https://www.reuters.com/business/aerospace-defense/turkeys-drone-maker-baykar-begins-build-plant-ukraine-2024-02-06/

Marson, J., & Forrest, B. (2021). Armed low-cost drones, made by turkey, reshape battlefields and geopolitics. *Wall Street Journal*, 3

Mayer, M. (2015). The new killer drones: Understanding the strategic implications of next-generation unmanned combat aerial vehicles. *International Affairs*, *91*(4), 765-780

Mayer, J., E., NATO STANAG 4671

Mevlutoglu, A. (2017). Commentary on Assessing the Turkish defense industry: structural issues and major challenges. *Defence Studies*, *17*(3), 282-294

Middle East Eye, (17 December 2015). Turkey to open first base in Middle East in Qatar. Available at: https://www.middleeasteye.net/news/turkey-open-first-base-middle-east-qatar

Mirza, M. N., Qaisrani, I. H., Ali, L. A., & Ali Naqvi, A. (2016). Unmanned Aerial Vehicles: A Revolution in the Making. *South Asia Studies*, *31*(2), 243-25

Nuclear News. (11/03/2024). "Commissioning work started at Turkey's first nuclear plant". *Nuclear Newswire, Power & Operations*. Available at: https://www.ans.org/news/article-5935/commissioning-work-started-atturkeys-first-nuclear-plant/ [Accessed on: 13/05/2024]

Pierre, A. J. (1981). Arms sales: the new diplomacy. *Foreign Affairs, 60(2),* 266-286

Pierre, A. J. (1982). The Global Politics of Arms Sales. *Princeton: Princeton University Press*

Plaw, A., & Fricker, M. S. (2012). Tracking the predators: Evaluating the US drone campaign in Pakistan. *International Studies Perspectives, 13(4),* 344-365

Postulart, J. (2021). Death from above: on the propaganda value of drones in the 2020 Nagorno-Karabakh war. *University of Amestard*, MA thesis

Putnam, R. D. (2017). Diplomacy and domestic politics: the logic of two-level games. In *International organization* (pp. 437-470). Routledge

Oğuzlu, H. T. (2016). Turkish foreign policy at the nexus of changing international and regional dynamics. *Turkish Studies*, *17*(1), 58-67

Oğuzlu, H. T. (2020). Turkish foreign policy in a changing world order. *All Azimuth: A Journal of Foreign Policy and Peace*, *9*(1), 127-139

Oğuzlu, T., & Han, A. K. (2023). Making Sense of Turkey's Foreign Policy from the Perspective of Neorealism. *Uluslararası İlişkiler Dergisi*, 1-19

Öniş, Z., & Kutlay, M. (2017). The dynamics of emerging middle-power influence in regional and global governance: the paradoxical case of Turkey. *Australian Journal of International Affairs*, 71(2), 164-183

Öniş, Z., & Kutlay, M. (2020). The new age of hybridity and clash of norms: China, BRICS, and challenges of global governance in a postliberal international order. *Alternatives*, 45(3), 123-142

Özdemir, I. (30/12/2017). 'Dünya 5'ten büyüktür' şarkı oldu. *Anadolu Ajansi*. Available at: https://www.aa.com.tr/tr/turkiye/dunya-5ten-buyuktur-sarki-oldu/1018538

Rasheed, Z. (24 January 2023). How China became the world's leading exporter of combat drones. *Aljazeera*. Available at: https://www.aljazeera.com/news/2023/1/24/how-china-became-the-worlds-leading-exporter-of-combat-drones

Rossiter, A., & Cannon, B. J. (2022). Turkey's rise as a drone power: trial by fire. *Defense & Security Analysis, 38(2)*, 210-229

Roketsan. Available at: https://www.roketsan.com.tr/en

Rfi, (01/03/2024). Lavrov in Turkey as Erdoğan seeks Ukraine peace breakthrough. *Radio France Internationale (RFI)*. Available at: https://www.rfi.fr/en/international-news/20240301-lavrov-in-turkey-as-erdogan-seeks-ukraine-peace-breakthrough [Accessed on: 03/05/2024]

SASAD Sektör Performans Raporu 2020. Available at: https://www.sasad.org.tr/sasad-sektor-performans-raporu-2020

Scherer, S., & Shakil, I. (29 January 2024). Canada drops weapons export controls to Turkey, including drone technology. *Reuters*. Available at: https://www.reuters.com/world/canada-drops-weapons-export-controls-turkey-including-drone-technology-2024-01-29/

Seufert, G. (2020). Turkey shifts the focus of its foreign policy: from Syria to the eastern Mediterranean and Libya (No. 6/2020). *SWP Comment*

Shapiro, A. J. (2012). A new era for US security assistance. *The Washington Quarterly*, 35(4), 23-35. P. 30

Shoaib, M. (2020). Turkish Intervention in the Libyan Civil War: Aims and Challenges. *Journal of Strategic Affairs 5*, no. 1, p. 35

SIPRI Arms Transfer Database: https://armstransfers.sipri.org

SIPRI Arms Transfer Database, Source and Methods. Available at: https://www.sipri.org/databases/armstransfers/sources-and-methods

SIPRI, Yearbook Archive. Available at: https://www.sipri.org/yearbook/archive

Smith, R., Humm, A., & Fontanel, J. (1985). The Economics of Exporting Arms. *Journal of Peace Research, 22(3),* 239-247

Soyaltin-Colella, D., & Demiryol, T. (2023). Unusual middle power activism and regime survival: Turkey's drone warfare and its regime-boosting effects. *Third World Quarterly, 44(4*), 724-743

Soylu, R., (5 October 2020). Turkish armed drones used against Armenia, Azerbaijan confirms. *Middle East Eye*. Available at: https://www.middleeasteye.net/news/armenia-azerbaijan-conflict-turkey-drones

Stein, A. (30/08/2022). The TB2: the value of a cheap and "good enough" drone. *Atlantic Council*. Available at: https://www.atlanticcouncil.org/content-series/airpower-after-ukraine/the-tb2-the-value-of-a-cheap-and-good-enough-drone/

Struys, W., 2004. The future of the defence firm in small and medium countries. *Defence and peace economics*, 15 (6), 551–564

Toksabay, E., & Nomiyama, C., (17/10/2023). Turkey to allocate 150% more to defense budget in 2024 minister. *Reuters*. Available at: https://www.reuters.com/world/middle-east/turkey-allocate-150-more-defense-budget-2024-minister-2023-10-17/

Turak, N. (04/03/2024). Turkish annual inflation soars to 67% in February. CNBC Economy. Available at: https://www.cnbc.com/2024/03/04/turkish-annual-inflation-soars-to-67percent-in-february. [Accessed on 25/04/2024]

Turkish Aerospace. About us. Available at: https://www.tusas.com/en/corporate/about-us

Turkish Aerospace, (29/12/2023) [X: TUSAS_EN]. Available at: https://x.com/TUSAS_EN/status/1740752533671563578 [Accessed 21/04/2024]

Türkiye Cumhuriyeti Dışişleri Bakanlığı Tarihçesi (Ministry of Foreign Affairs of the Republic of Türkiye), "Statement of the Spokesperson of the Ministry of Foreign Affairs, Mr. Hami Aksoy, in Response to a Question Regarding the Armenian Attacks on Azerbaijan Which Started This Morning", (27 September 2020). Available at: https://www.mfa.gov.tr/sc_-94_-ermenistan-in-azerbaycan-a-karsi-baslattigi-saldiri-hk-sc.en.mfa

Urcosta, R. B. (2021). Turkish Drone Doctrine and Theaters of War in the Greater Middle East. *Small Wars Journal*.

Wade, R. H. (2011). Emerging world order? From multipolarity to multilateralism in the G20, the World Bank, and the IMF. *Politics & society*, *39*(3), 347-378

Wagner, W., & Sloan, W. P. (1992). *Fireflies and Other UAV's (unmanned Aerial Vehicles)*. Aerofax

West, J. P., & Bowman, J. S. (2016). The domestic use of drones: An ethical analysis of surveillance issues. *Public Administration Review, 76(4),* 649-659

Wever, M. (17/03/2022). "What Weapons have Other Countries Supplied to Ukraine?" *The Guardian.* Available at: https://www.theguardian.com/world/2022/mar/17/what-weapons-have-other-countries-supplied-to-ukraine [Accessed on: 13/05/2024]

Wezeman, P. D., Gadon, J., & Wezeman S. T. (2023). Trends in international arms transfers, 2022. *SIPRI,* https://doi.org/10.55163/CPNS8443

Willardson, S. L. (2013). *Under the influence Of arms: the foreign policy causes and consequences of arms transfers*. The University of Iowa

Witt, S. (2022). The Turkish drone that changed the nature of warfare. *The New Yorker*, 9

Yeni Şafak (24/05/2022). Ukrayna ordusu Bayraktar için özel klip çekti. *You Tube*. Available at: https://youtu.be/JGwUvSpcv8c?si=7hNDLxQOZv_Gm8vk