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RESEARCH ARTICLE

'All Quiet on The Western Front': Turkey's Reintegration(?) into NATO through National Defense Industry

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ABSTRACT

Nationalizing the defense industry has been a priority for the Justice and Development Party (Adalet ve Kalkınma Partisi – JDP). This attempt was also interpreted as a part of Turkey's move away from its Western alliances, specifically North Atlantic Treaty Organization (NATO).

This study suggests that while Turkey's fluctuating relations with NATO fueled its efforts to develop a national defense industry, the continued development of the industry relies on sustained relations with NATO (at least for the foreseeable future) for two reasons. First, despite the significant progress made, Turkey's membership in NATO created a path dependence and resulted in the national defense industry's heavy reliance on NATO members for its growth. As a result, the industry is still tied primarily to NATO allies for the sustained imports of technology, parts and licensing. Second, the coercive instruments at NATO's disposal (sanctions and embargoes) increase the costs of a potential departure from the Alliance.

KEYWORDS: Turkey; NATO; National Defense Industry

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1. Introduction

When, the then prime minister, Recep Tayyip Erdoğan announced JDP's '2023 Political Vision' (2023 Siyasi Vizyonu) in 2011, the development of 'national tank, national aircraft, national ship and national satellite' was listed among national defense policy goals (Sabah 2011). In early 2019, the head of the Presidency of Defense Industries summarized Turkey's goals about its national defense industry as 'By 2053, the Turkish defense industry aims to be 100 percent independent with an export capacity of $50 billion' (Demirtaş 2019). Regardless of the feasibility of this goal, it is true that Turkey has made observable progress in developing its national defense industry. Stockholm International Peace Research Institute (SIPRI) categorized Turkey as an 'emerging producer' in its 2020 report along with Brazil and India (SIPRI 2020a).

While Turkey's desire to develop its national defense industry is a techno-nationalist project that aims to increase Turkey's role and power within the international system, it is also informed by the insecurity that Turkey feels about the existing security protection it gets through its primary defense alliance, the NATO. As a reaction to reoccurring tensions between Turkey and NATO countries, in general, and the USA in particular, Turkey not only started to invest heavily into its defense industry but also took steps to diversify its defense capacity.

In December 2017, Turkey announced that it concluded a deal with Russia for the procurement of the S-400 missile defense system. The announcement met with strong criticism from Turkey's NATO allies that voiced concerns about the compatibility of the system with NATO's defense structure. The deal came at a time when the relations between Turkey and NATO are increasingly tense and when a perceived shift is taking place in the Turkish government's foreign policy priorities. These conditions heightened the negative reaction the deal created.

The NATO members' discontent with Turkey's decision to buy S-400 escalated to such a level that Turkey got suspended from the F35 Joint Strike Fighter Program. Around the same time, Turkey initiated a military operation into Syria (Operation Peace Spring), which resulted in the initiation of an arms sales embargo by several NATO countries. As a reaction to the embargo, the President of Defense Industries İsmail Demir said in an interview 'we did our analysis, we have taken measures in areas such as alternative energy sources and domestic production' (CNN Türk 2019). In the face of coercive measures used by NATO, the political rhetoric increasingly hints at potential severance from NATO and highlights the national defense industry as both a reason for and instrument through which such parting would take place.

It is the argument of this paper that Turkey meeting its defense needs by itself (and only for itself) is neither technologically nor economically or politically attainable or even desirable, at least in the foreseeable future. The globalized nature of the defense industry creates incentives for Turkey to increase its exports and remain engaged with the global market if it wants to keep developing its national defense industry. If Turkey was to be engaging in these activities in a political vacuum it would have, theoretically, given Turkey a free hand to pick and choose its alliances. However, both the historical development and the current functioning of the Turkish defense industry is heavily tied to its membership in NATO. On the one hand, the continued reliance on imports (in parts, technology as well as licensing) constitutes the economic and technical reasoning behind these ties. On the other hand, the embeddedness of NATO in Turkey's defense structure, policies, and capacities in addition to the coercive mechanisms that the Alliance has (specifically in the form of sanctions and embargoes) create strong political and military incentives for Turkey to stay committed to NATO. Thus, while the tensions between Turkey and NATO have been one of the most important driving forces behind Turkey's quest to develop a national defense industry, such desire in return creates incentives for Turkey to stay within NATO.

The first section below details the functioning of the global defense market to illustrate the difficulty of reaching defense autarky. The second section discusses the role of NATO in shaping its members' defense industries. NATO's function (and the tools at its disposal) both as an enabler and as an inhibiter for member states' quest to develop their defense industries are highlighted. The third section provides a historical account of Turkey's quest to develop a national defense industry and how these efforts were affected by Turkey's membership in NATO. The paper concludes with a discussion on why Turkey's desire to further develop its national defense industry is likely to sustain its ties with NATO rather than resulting in further estrangement.

2. Global Defense Market and Defense Autarky

The defense market is highly globalized and is characterized by a small cluster of suppliers that derive not just economic but also political power through the intricate web of trade in defense products. Several factors contribute to the globalization of the defense market. While on the one hand, the logic of economics has been contributing to the development of transnational defense companies, the desire to be self-reliant (be less dependent to the largest arms producer, the USA), for security and economic reasons, made more and more countries invest in their defense industries (Hayward 2009). Nevertheless, the structure and the functioning of the global defense market make reaching defense autarky economically, technologically, and politically extremely difficult, or even undesirable for newly established producers.

When we look at today's global defense market, what we see is somewhere between what techno-nationalists and techno-globalists believe in. To the distaste of 'techno-nationalists', who believe in the predominance of national boundaries in the development of technologies, military technologies spread around the world not just through imperialism but also through the export of weapons and the transfer of weapon producing technologies (Buzan & Herring 1998). Yet, as opposed to what 'techno-globalists' would argue, such expansion did not create an even market where technology is globally developed, produced, and consumed (Edgerton 2007). Rather the diffusion of military technology contributed to the unevenness of relations between countries, a hierarchy between the haves (which also have a hierarch within it depending on the types of weapons that a county can produce) and the have-nots which continuously fluctuates with the development of new military technologies and the expansion of production capabilities (Buzan & Herring 1998).

According to the most recent 'Arms Transfer Data' by SIPRI, the United States is the largest arms exporter with close to $10.8 billion export per year, which is more than double of what the second-largest exporter Russia did ($4.7 billion) in 2019 (see Table 1). Given the fact that the defense industry and arms trade is dominated by a few countries, and the extreme difficulties that other states face in their bids to be competitive internationally, it becomes important to understand why developing states, such as Turkey, still invest in national defense industries and what kind of an impact such attempts have on the global market.

Economics of scale also creates an incentive for states to export their arms. Since the more advanced a military technology gets the more expensive it becomes, 'nearly all arms producers have strong incentives to export' to meet their needs for reasonable costs (Buzan & Herring 1998, p.35). This in return 'ease[s] [developing countries'] access to much-needed technology transfers for the development of their domestic defense industries' and allows them to develop their indigenous defense industries (Kurç & Neuman 2017, p.220).

Technological advancements such as '3-D printing and improved computer modeling and capacity for simulation' also contributes to the globalization of defense suppliers as such advancements would make it possible for more companies to shoulder the costs of prototyping and testing (Rowlands & Kabongi 2017, p.65). Yet, such changes are not likely to fundamentally change the market in the short run, which means that further developing national defense industries will continue to rely on international cooperation and continued transfer of technology from established producers.

Table 1 - Ratio of arms exported to arms imported (2019 figures)

Rank[a]	Country	Exports in arms[b]	Imports in arms[b]	Ratio of arms exported/arms imported
1	United States	10752	1048	10,3
2	Russia	4718	0,5	9436,0
3	France	3368	102	33,0
4	China	1423	887	1,6
5	Germany	1185	39	30,4
6	Spain	1061	56	18,9
7	United Kingdom	972	377	2,6
8	South Korea	688	1510	0,5
9	Italy	491	186	2,6
10	Israel	369	507	0,7
11	Netherlands	285	490	0,6
12	Switzerland	254	13	19,5
13	Turkey	245	833	0,3
14	Sweden	206	9	22,9
15	Canada	188	200	0,9

[a] *As a supplier.*
[b] *In million US$.*
Source: Table compiled by the author based on SIPRI Arms Transfer Database 'TIV of arms exports and arms imports', http://armstrade.sipri.org/armstrade/html/export_toplist.php; https://armstrade.sipri.org/armstrade/html/export_toplist.php

It should be noted that while any defense industry, that wants to expand its operation and profit, needs to be integrated into the global market, not all countries' defense industries are equally dependent on exports (see Table 1) and hence, they are not equally eager about the globalization of the market. In addition to the defense industries' capacity, the decisions regarding the sale of arms (and to whom) is a balancing act between strategic and economic calculations of the states. Lucie Beraud-Sudreau and Hugo Meijer (2016, p.58) suggest that a country's position in the 'world hierarchy of weapon producers' as well as the defense industry's level of dependency on exports shape policies. The authors suggest that if the defense budget of a country is big then there would be less dependency on exports and less enthusiasm to sell weapons. Similarly, the higher a country is on the hierarchy of weapon producers, the less inclined they would be to export to hold onto their ranking by preventing the diffusion of advanced military technologies (Beraud-Sudreau & Meijer 2016). The varying degrees of willingness to diffuse defense technology further contribute to the creation of an ever-expanding yet increasingly uneven market, where the implications of diffusion for states' relative position in the international system are taken into account alongside the economic gains to be cultivated.

From the perspective of developing countries, the desire to invest in their national defense industries is not only a result of the opportunity that the interests of the established producers created for it. There are security, identity, and economic dimensions that states take into account in prioritizing the development of their national defense industries. Rather than being separate concerns, these dimensions are intertwined. National defense industries are, at the most fundamental level, developed to allow a country to be self-reliant on equipping its military with necessary capabilities. However, they are also a source and an indicator of identity and international prestige that illustrates a country's industrial and military capabilities and signals its strength, if need be. Bitzinger and Kim (2005) explain developing countries' attempts to develop their national defense industries partly as a result of 'techno-nationalism'. In David E. H. Edgerton's (2007, p.3) words, techno-nationalism is not only about becoming autarchic but also illustrating that a 'country is best fitted for the technological age' which supports the reimagining of national identities in the face of a changing global environment.

In addition to being a source of pride and prestige, becoming an arms producer also has implications for a state's relative power in the international system. Arms suppliers enjoy varying degrees of control on buyer states through shaping (and limiting) their military capabilities as well as their foreign policy (for instance through embargoes), which is an edge that developing countries would benefit from having (Neuman 1988; Boutin 2009). However, as the below analysis illustrates, states' capacity to convert defense production to political power varies based on the relative power of the state within the international system, how advanced of a producer the state is, and how reliant the defense industry is to exports.

The desire to develop a national defense industry is also driven by domestic motivations to create jobs and to cultivate political capital from increased economic wealth (Bağcı & Kurç 2017). It can also be used as a way of 'improv[ing] balance of payments' by limiting the money spent on importing weapons (Brzoska & Ohlson 1986). As it is pointed out earlier, the national defense industry becomes a source of economic wealth only when it has an export component to it. Rahman and Siddiqui (2019) illustrate in their recent study that, while defense spending normally harms economic growth as it means less of the budget is spared for other areas (Ram 1995; Dunne & Tian 2013), when coupled with arms exports, it has a 'positive and significant effect' on GDP.

The importance of export in the defense industry is not only limited to its impact on a country's economic growth, it is also considered to be essential in 'maintain[ing] [the industry's] size and sophistication' so that if the domestic need arises the industry could respond quickly (Hen-Tov 2004, p.57). This leads to what (Moravcsik 1991) calls an 'autarky-efficiency dilemma', which means that even though the optimal scenario is to be self-sufficient in defense needs and to not sell them to other countries (to avoid security dilemma), the production of weaponry involves high costs and keeping the defense industry up to date requires continues investment, as such selling of weapons to other countries becomes a necessity.

Since governments are the main buyers in the market, both domestic and international factors shaping their procurement decisions are of the highest importance for the future of any defense industry. For that reason, a country's defense industry's ability to sell its products internationally cannot be thought independently of that country's relations with the others. Therefore, while increasing security concerns is important for defense sales, the more dependent a country's defense industry is on exports the more they would be susceptible to any potential disturbance they might have with their trading partners. Similarly, as identified above, since established producers also make strategic calculations in choosing which newly developing industries to share their technology and collaborate in production with, newly developing defense industries are also vulnerable to any disturbance they might have with their collaborators. Thus, while developing national defense industry has a lot of security, political, and economic value to it, the connections through which it develops has a strong bearing on the trajectory of its developments.

3. Military Alliances and Defense Industries: The Case of NATO

The discussion above illustrates the unevenness of the global defense market and highlights the conditions that drive (and limit) the expansion of defense industries. The discussion also suggests that the ability of a country to develop a national defense industry depends on not just domestic factors but also conditioned upon the willingness on the part of the established producers to welcome the new producer into the market. This section discusses the opportunities and limitations that NATO, as a prominent military alliance, presents to its members' attempts at developing national defense industries.

The North Atlantic Treaty that created a mutual defense alliance among its members was signed in 1949 as a part of the perceived need to counter the ideological and territorial expansion of the Soviet Union (Sandler & Harthley 1999). As the political landscape evolved, first with the end of the Cold War (that brought an end to 'the Soviet threat') and then with the terrorist attacks of September 11, 2001 (that turned non-state actors into the biggest security threats in the international system), NATO found itself in a dire need to reidentify its purpose and reclaim its relevance. First by shifting its focus to civil wars and humanitarian crises after the collapse of the Soviet Union and then by identifying 'terrorism' as the threat to defend its members against, NATO has tried to survive a crisis of mission and a crisis of identity. Currently, with the rise of populist leaders and increasing tendency to seek unilateralism, as seen in the steps taken by the Trump administration, NATO is facing yet another problem in front of its relevance and efficacy.

Military alliances, such as NATO are identified as important in the literature not just for the military protection they provide for their members but also for serving as a forum for communication and cooperation as well as for their function as 'brands' that contribute to a state's identity. Another dimension of military alliances that is less discussed is their political economy implications. Military alliances create a demand and supply for military supplies and encourage its members to abide by certain rules as to budgeting, production, and trade in arms. Military alliances, thus, create path dependency regarding patterns of behavior in making procurement decisions as to the established links, mutual understanding of threats, and a common identity decreases the negative externalities of arms trade for both the supplier and the receiver. As Callado-Munoz et al. (2019, p.1) analyzed the impact of the Alliance on NATO members trading in arms and found that military alliances create positive 'security and technology externalities' for its members, as allies are more likely to procure their arms from each other.

The earliest, and possibly the most influential study, that analyzed military alliances from an economic point of view was done by Olson and Zeckhauser (1966). Using formal modeling they approached security alliances as a public good (once it achieves its purpose all members will enjoy the security provided regardless of their contribution to its creation). Taking the disproportionate share that the USA shoulders in collective defense spending within the NATO this study suggests that the 'public good' nature of collective security would inevitably lead to free-riding. Duncan Snidal (1991), taking on the issue, helps explain why the USA would be willing to agree to such disproportionate burden-sharing. Snidal (1991, p.720) suggests that 'an asymmetric distribution of absolute gains may be a requisite for striking cooperative agreements among different-sized states concerned about relative gains'. Snidal bases his argument on the assumption that smaller states would be more worried about relative gains which encourage larger states to offer more as they would prefer an 'unequal cooperative arrangement to no cooperation' (Snidal 1991, p.720). Later scholars, however, suggested that (Murdoch 1995; Sandler & Harthley 2001; Rowlands and Kabongi 2017), free-riding behavior would lead to suboptimal defense spending unless mechanisms or norms that push for greater cooperation is put in place. The NATO aimed to address this problem through Article 3 of the North Atlantic Treaty which states that 'in order more effectively to achieve the objectives of this Treaty, the Parties, separately and jointly, by means of continuous and effective self-help and mutual aid, will maintain and develop their individual and collective capacity to resist armed attack' (North Atlantic Treaty 1949). Thus, NATO, in theory, would support member states' attempts at developing their national defense industries.

Later studies expanded this model of military alliances and highlighted the nuance between defense to be enjoyed by all members of an alliance as a public good (such as nuclear deterrence) and as private good (impurely public benefit) owned by each member (such as anti-ballistic missiles) (Russett 1970; Sandler & Forbes 1980; Sandler 1988; Sandler & Hartley 2001; Rowlands & Kabongi 2017). This new model, called the 'joint-products model', suggests that such private gains would limit the free-riding problem and help sustain military alliances (Oneal 1990; Sandler 1993). As such, these studies not only explain why states choose to invest in their defense industries rather than becoming 'free-riders' but also why members' desire to develop their defense industries is not, by itself, a threat to the alliance.

Nevertheless, the member states' desire to become self-reliant in their defense needs does not need to stem from an attempt to address the free-riding problem to sustain the alliance but could rather results from their concerns about the protection they get through the alliance. The tension between the USA and the Western European members of the NATO alliance has long been bubbling. This tension led to a growing effort on the part of the European countries to develop a 'European security and defense identity' (Missiroli 2002, p.9). These efforts were a function of European countries' desire to make security decisions independent of the USA with the realization that transatlantic security interests would not necessarily overlap. The concerns about the divergence of interests were proven right when American president Donald Trump, who geared the USA toward unilateralism, threatened to leave the Alliance if other members would not stop 'free-riding' (The

New York Times 2018). However, such 'threats of abandonment' are not peculiar to the Trump administration, either. The historical evidence illustrates that the USA perceived its commitment to Europe to be temporary during the 1950s and threatened to leave the Alliance when in 1960s France (with the initial support of West Germany) pushed to be more independent (and in a leading role) when it came to European politics (Schuessler & Shifrinson 2019). France's investment in developing nuclear weapons in the 1960s, for instance, was seen 'not as a defense against the Soviet threat, but as a tool with which to free themselves from American domination' (Regnault, 2003 cited in Côrte-réal Pinto 2017, p.305; Galbreath & Gebhard 2010).

However closely knit they might be, alliances are still composed of self-interested actors with varying levels of power and multiple interests that may diverge at any time. While such differences do not necessarily break down an alliance, competition, as well as mechanisms of coercion, should be taken into account in explaining the impact that an alliance has on a member state's policy choices. That is to say, while the USA has been complaining about the disproportionate burden it shoulders within the NATO structure and calls for European members to pick up their share, the USA's desire to share the burden does not aim to shake the relative power of the USA in the Alliance. As an example of this Gene Gerzhoy (2015, p.92) argues that what prevented West Germany's from pursuing nuclear ambitions was 'the logic of alliance coercion', 'a strategy consisting of a patron's [the USA's] use of conditional threats of military abandonment to obtain a client's compliance with its demands.'

It can be concluded that military alliances in general and NATO, in particular, create both incentives for and limitations in front of member states' attempts at developing national defense industries. While the powerful members of the alliance support such initiatives to the extent that they help share the burden of collective defense requirements, they object to any attempt that would shuffle the power dynamics within the alliance. Similarly, while concerns about the defense, that the alliance would provide, create a motive for states to develop their national defense industries, the countries, nonetheless, rely on the connections they established through the alliance in developing defense industries. The alliance's power to have such influence over its members comes from both the patterns of behavior it creates but also the coercive mechanisms it entails.

4. Turkey's National Defense Industry

4.1. Turkey-NATO Relations as an Impetus for the Development of National Defense Industry

The history of the modern Turkish national defense industry can be traced back to the establishment of the Republic in 1923. Coming out of a war of independence and adopting an economic approach that relies on national capabilities, the state laid the early foundations of a state-led national defense industry (Côrte-réal Pinto 2017). While domestic factors played an important role in the development of the national defense industry,[1] the below short historical account traces the development of the national defense industry in the light of Turkey-NATO relations.

Turkey's decision to stay out of World War II created concerns about its commitment to the Western camp after the war. However, Turkey's geopolitical position was too important for the Western camp to leave Turkey to its devices and Korean War presented an opportunity for Turkey to illustrate its commitment to the common identity (Yılmaz & Bilgin 2005). As a result, Turkey became a NATO member in 1951. The early and, due to the economic limitations, modest steps are taken to establish a national defense industry came to a halt when Turkey joined

[1] It needs to be noted that while this study focuses on the international factors' impact on the development of the defense industry, domestic factors also have played, and still play, a role in shaping these developments. In that respect, in addition to technological limitations, institutional weaknesses and lack of coherence in policymaking can be listed as important impediments in front of Turkey's prospects for developing defense autarky (Kurç 2017). The problem of leadership which stems from the tension in civil-military relations found its reflection in several problems including '[lack of] clear division of responsibilities, [lack of] agreement on the appropriate structure of the defense industry, the ownership of the companies that belong to the Türk Silahlı Kuvvetleri Güçlendirme Vakfı (TSKGV – Turkish Armed Forces Foundation), and the role of military factories and shipyards in defense production' (Kurç 2017, p.266).

NATO and the surplus inventory of NATO allies transferred to Turkey free of charge (Kayaoğlu, 2009; Côrte-réal Pinto 2017).

During the 1950s, as the room given to private initiatives in the economy expanded, the connections established through the NATO alliance, allowed Turkey to take steps toward developing its defense industry which started to include more and more private firms (Côrte-réal Pinto 2017). The early crises took place in the 1960s, primarily with the USA, created the initial realization of the downside of alliances. Turkey had a fallout, primarily with the USA, first with the Cuban Missile Crisis in 1962 and then with the Cyprus problem in 1964 and 1974, which led to an arms embargo initiated in 1975 and lasted for three years (Uslu 2003; Williams 2016). These developments led Turkey to start questioning the 'NATO's commitment to protecting Turkish interests and led Ankara to seek ways of diversifying its foreign policy' (Çelik 1999, p.2). They also demonstrated the need to develop a national defense industry (Günlük-Şenesen 1993; Bozdağlıoğlu 2003; Akça 2010; TASAM 2015).

When we came to the early 1980s, while the need for developing the national defense industry has become very clear, the imminent need to equip the military with modern arms in the face of the rising threat of PKK terrorism prioritized the import of such arms (Günlük-Şenesen 2002). In the meantime, the national defense industry also started to make observable progress. A law passed in 1985 that aimed to 'develop a modern defense industry and ensure the modernization of the Turkish armed forces' created both a designated budget and a specific Undersecretariat responsible for the administration of the sector.[2] In 1996 the efforts to modernize the army were boosted by an increase in the dedicated budget which was expected to be $150 billion over the following 30 years (Hen-Tov 2004). The dedicated budget was renewed once again in 2000 and $20 billion was spared to be spent on the modernization of the army over the course of ten years (Akça 2010).

It needs to be noted that Turkey's attempts to develop its national defense industry has not always raised eyebrows among its Western allies. The USA was

[2] Savunma Sanayii İle İlgili Bazi Düzenlemeler Hakkinda Kanun No.3238 Date 7/11/1985

supportive of the steps taken by Turkey primarily for commercial reasons (the possibility of a partnership between American and Turkish firms that would create new markets for American interests). The European partners saw this as a commercial opportunity, as well but they were also interested in the contribution such a development would make to European countries' attempts to become less dependent on the USA for their security needs (Côrte-réal Pinto 2017). Turkey started to take part in 'European military-industrial projects' which also helped repatch Turkey's relations with the European Economic Community (Côrte-réal Pinto 2017).

The most important progress in developing a national defense industry took place under the JDP rule. Because of the opacity that surrounds data regarding the defense industry, it is very difficult to get an accurate picture of how much of Turkey's national defense needs are met domestically. The most frequently cited numbers by the officials, including Hulusi Akar, the Minister of Defense, state that the Turkish national defense industry now produces about 70% of its military's needs which is a testament of progress compared to earlier periods (Sözcü 2019).

When the JDP came to power, they made it a point to distinguish their foreign policy approach from earlier periods, at least in rhetoric. Kemalist foreign policy was considered to be realist, cautious, reactive, and predominantly Western-oriented while JDP illustrated ambition to have a proactive foreign policy that is more engaged with its regional politics (Zürcher 2004). When JDP came to power they had a rather pro-EU attitude which led to many legal and political reforms and friendly relations with Western allies. However, due to several reasons explained below Turkey's relations with the USA and Western European countries, and by extension, NATO started to fluctuate. While such fluctuations in Turkey's relations with NATO are not peculiar to this new era, they nevertheless, presented an impetus for the development of the Turkish defense industry to pick up speed.

The reoccurring tensions between NATO and Turkey generally resulted from escalated tension between Turkey and the USA but were not limited to it. The first tension between the USA and Turkey of the JDP era took place in 2003 when the Turkish parliament, in the wake of the War in Iraq, rejected the proposal to allow more than 60,000 American troops to operate out of Turkish bases which forced the entire war plan to be revised and to be delayed (CNN 2003). The civil war in Syria, that started in 2011, also contributed to the straining of relations between the USA and Turkey as they had different priorities in the region. The USA has been prioritizing defeating ISIS in Syria and cooperating with various armed non-state actors in doing so - including Democratic Union Party (Partiya Yekitiya Demokrat—PYD). Turkey considers PYD as an extension of the terrorist organization Kurdistan Workers' Party (Partiya Karkeren Kurdistani—PKK), that Turkey has been fighting against for over thirty years and the support they receive from the USA was not welcomed by Turkey. On the other hand, for Turkey, the priority was to see the Bashar al-Asad government overthrown which Turkish policymakers thought was a done deal at the beginning of the civil war (Park 2015).

Turkey's relations with NATO has also suffered many smaller tensions including Turkey's reluctance about the appointment of former Danish Prime Minister Anders Fogh Rasmussen as the Secretary-General of NATO due to his stance during the Muhammad cartoons controversy (resulted from the depiction of Prophet Muhammad in a series of cartoons published by a Danish newspaper which Muslims perceived as blasphemy). Turkey's initial opposition to the deployment of NATO forces to Libya in 2011 (which resulted from Turkey's concerns about other Muslim countries' reaction to a NATO involvement in a Muslim country) also led to concerns about Turkey's commitment to the alliance (Oğuzlu 2013).

NATO has not been the only side in this relationship that has concerns about the other's commitment. Turkey also interpreted several steps taken by NATO as signs of less than full commitment to Turkey's protection. Following the downing of a Turkish jet by Syrian forces in 2012, Patriot missiles, contributed by Germany, the Netherlands, and the USA were stationed by NATO in the Southern border of Turkey (NATO 2017). In August 2015 first Germany and then the USA announced their plans for the withdrawal of their batteries. After the downing of a Russian jet by Turkish defense forces in November 2015, while voicing concerns about getting NATO dragged into a conflict with Russia, NATO agreed to increase its 'air and maritime presence along the borders and prevent future incidents', (Sloat 2018, p.15) which fell short of Turkey's expectations. The failed coup attempt of July 15, 2016, not only created a significant trauma but also impacted Turkey's threat perceptions and increased concerns about Western allies' commitment to protecting Turkey (Egeli 2019). As discussed below, these concerns led to a warming of relations with Russia which later affected the defense procurement decisions.

The above historical account illustrates that the current tension between Turkey and NATO is not unprecedented. Historically, while NATO membership was crucial to Turkey's defense capabilities, the fluctuating relations also created incentives for Turkey to invest in its defense industry. Combined with domestic factors, these developments paved the way for Turkey to become a sizeable defense producer and heightened the calls for/ worries about Turkey's potential departure from NATO. The next section details out how the desire to develop the defense industry is likely to keep Turkey in NATO rather than drifting them apart.

4.2. The Ties that Bind: The National Defense Industry as an Impetus for Sustaining Turkey-NATO Relations

While Turkey's perceived need to become self-reliant in its defense needs was the driving force behind the investment in the defense industry, further developing the defense industry depends on (i) the sustained flow of imports needed for production and (ii) increased export capacity. Due to the path dependency that Turkey's NATO membership created, both of these conditions could not be met, at least in the foreseeable, if Turkey were to have a complete fallout with NATO.

The steps taken to rely more on the national defense industry led to both an increased domestic production and also a further integration into the global market at the same time (Côrte-réal Pinto 2017). Turkey's progress in developing indigenous defense technologies was crucial in it. For instance, Bayraktar TB2[3], an unmanned

[3] There are speculations about the role of a British company, EDO MBM Technology, in the provision of 'missile racks' in the early development stages of the TB2. Neither side confirms the transaction and it is accepted that the final product is using components developed and produced in Turkey (Guardian 2019).

aerial vehicle (UAV) produced by Baykar not only exemplifies indigenous technological achievement but also had a demonstrable effect on Turkey's ability to project its military capacity independent of its Western allies. Bayraktar TB2 got battle-tested in Syria, Libya, and was recently used by Azerbaijan in the Karabakh conflict and Baykar has already signed deals with Qatar and Ukraine for the sale of Bayraktar TB2 (Bekdil 2020).

The policymakers are aware of the need to find a place for Turkish products in the global market to sustain the growth of the industry. The Presidency of Defense Industries states in a report prepared in 2018 that

> Within the scope of the protection of Turkish money, restrictions were imposed on foreign currency billing in domestic projects. As the healthiest way to provide foreign currency input to domestic firms is to increase exports, exports were identified as one of the main elements of establishing a sustainable and competitive defense industry ecosystem… (Savunma Sanayii Müsteşarlığı 2018, p.12)

Turkey has steadily increased its position in the global defense market and as of 2019, Turkey ranks as the 12th largest arms exporter in the world with a sale volume of $ 245 million worth of arms (See Table 2). Two Turkish companies ASELSAN and Turkish Aerospace Industries rank among the Top 100 arms-producing companies around the world (See Table 3).[4]

[4] The significantly increased production capacity along with the observed impact that defense exports have on Turkey's relations with its trade partners gave Turkey a boost of confidence regarding its ability to become autarkic and also project power through exports. Despite such progress, there is still a large gap between the largest arms exporters and the rest of the world, thus Turkey's increased production and export volume needs to be contextualized within the hierarchical structure of the global defense market (See Table 1) Thus while increasing its share Turkey has not developed the capacity to match the lead exporters in the industry.

Table 2 - Turkey's ranking in 'Top 50 Largest Exporters'

Year	Ranking	Arms exports[a]
2019	12	245
2018	13	265
2017	14	171
2016	14	232
2015	15	248
2014	18	165
2013	18	156
2012	22	143
2011	23	86
2010	22	72
2009	19	63
2008	21	111
2007	20	66
2006	27	82
2005	28	23
2004	26	28
2003	30	42
2002	36	26
2001	27	5
2000	25	19

[a]in US$ millions
Source: Table compiled by the author based on SIPRI Arms Transfer Database "TIV of arms exports from the top 50 largest exporters" http://armstrade.sipri.org/armstrade/html/export_toplist.php

Table 3 - ASELSAN's and Turkish Aerospace Industries' ranking in 'Arms Industry Database Top 100'

	ASELSAN		Turkish Aerospace Industries	
Year	**Ranking**	**Arms sales[a]**	**Ranking**	**Arms sales[a]**
2018	54	1740	84	1070
2017	62	1440	71	1240
2016	70	1200	79	1120
2015	76	1000	83	890
2014	76	1130	95	850
2013	71	1110	-	-
2012	91	860	-	-
2011	91	850	-	-
2010	92	760	-	-

[a]In US$ millions
Source: Table is compiled by the author based on The SIPRI Arms Industry Database Top 100 for 2002-2018 (excluding China) https://www.sipri.org/databases/armsindustry1

Turkey has been capitalizing on its NATO membership as a way of increasing exports. To further utilize this connection, Turkey specifically focused on finding ways to take part in multinational projects such as the ones developed by NATO and Organization for Joint Armaments Cooperation (OCCAR) and also through bilateral deals[5] (Bağcı & Kurç 2017). The Undersecretariat for Defense Industries prepared a 2017-2021 International Cooperation and Export Strategic Plan in which 'Increasing the Contribution of NATO-CNAD [Conference of National Armaments Directors] Activities to International Cooperation and Industrialization Activities' was identified as one of the strategic goals. The roadmap to this strategic goal was explained as

> with a holistic approach, increasing the contribution of armament cooperation to industrialization activities within NATO, more effective representation and

[5] Turkey is a 'non-member programme participating state' http://www.occar.int/about-us

promotion in NATO, more effective participation of SSM project groups in working groups, the ability of SSM project units to benefit from information gained in NATO more effectively,….the industry is aimed to take a more active role in NATO (Savunma Sanayii Müsteşarlığı 2017, p.8).

Thus, cooperation and coordination with NATO are perceived by policymakers as an essential component for the sustained growth of the national defense industry. Moreover, Turkish firms actively seek NATO certification both to be able to sell their products to NATO countries and also to use the certification as an indication of their quality in promoting the products to other countries.[6]

While a significant increase in exports is contributing to Turkey both economically and diplomatically, the Turkish national defense industry's continued reliance on imports creates an important incentive for Turkey to stay committed to NATO. Table 4 illustrates that as Turkey was increasing its level of exports in arms it sustained its level of imports in arms industries. Turkey currently ranks as the 10th largest arms importer in the world. Moreover, most of the imports come from NATO allies (See Table 5) which is an outcome of the historical process through which the Turkish defense industry was developed.

[6] See for instance 'Nato Sertifikasına Bir Adım Kaldı' (One Step Left for NATO Certification) Cumhuriyet 27 June 2019 http://www.cumhuriyet.com.tr/haber/nato-sertifikasina-bir-adim-kaldi-1460313

Table 4 - Turkey's ranking in 'Top 50 Largest Importers'

Year	Ranking	Arms imports[a]
2019	10	833
2018	13	591
2017	23	425
2016	23	331
2015	18	441
2014	3	1526
2013	8	796
2012	3	1500
2011	13	779
2010	15	484
2009	12	732
2008	12	640
2007	12	692
2006	13	531
2005	5	1095
2004	22	257
2003	15	330
2002	3	905
2001	12	510
2000	3	2521

[a]*in $ millions*

Source: Table compiled by the author based on SIPRI Arms Transfer Database "TIV of arms exports from the top 50 largest importers" http://armstrade.sipri.org/armstrade/html/export_toplist.php

Table 5 - Turkey's Defense Imports (2000-2019)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
United States	**520**	**138**	**448**	**232**	**129**	**272**	**5**	**25**	**49**	**21**	**11**	**335**	**1009**	**363**	**1112**	**303**	**187**	**148**	**229**	**128**	**5663**
Germany	**298**				**21**	**602**	**330**	**404**	**287**	**167**	**126**	**40**	**28**	**12**	**48**	**12**		**24**	**28**	**28**	**2455**
South Korea					69	104	104	104	104	130	181	206	198	165	6	6	6	6	6	6	1397
Italy	**10**	**15**	**15**	**15**		**35**	**30**		**30**	**5**	**5**	**13**	**168**	**35**	**69**	**32**	**139**	**89**	**151**	**221**	**1077**
Spain														**135**	**229**	**73**		**146**	**146**	**146**	**875**
Israel		46	94	48	10	3	6	99	97	320	69	22	9		17	15					854
United Kingdom	**150**	**135**	**142**	**14**	**14**	**38**	**14**	**26**	**26**	**26**	**25**										610
France	**156**	**170**	**193**	**15**										**15**	**8**						556
Netherlands	**22**					**27**	**13**		**13**	**13**	**13**	**42**	**38**	**67**	**38**			**13**	**30**	**17**	346
Russia										16	16									280	312
China	6		7	7	14	14	28	35	35	35	35	35	35								286
Saudi Arabia												62									62
Canada											**3**	**12**	**9**	**4**					**1**	**8**	**37**
Norway		**6**	**6**									**12**									**24**
Switzerland	23																				23
Denmark													**9**								**9**
Total	1185	510	905	330	257	1095	531	692	640	732	484	779	1500	796	1526	441	331	425	591	833	14584

[a] *Bold indicates NATO members.*
[b] *in US$ millions*
Source: Table compiled by the author based on SIPRI Arms Transfer Database "TIV of arms exports to Turkey, 2000-2019" http://armstrade.sipri.org/armstrade/html/export_toplist.php

Not just the sheer volume of the defense imports but also the content of the imported goods has implications for Turkey's relations with NATO. Turkey progressed from importing off-the-shelf, completed weapons system to the import of 'critical systems, sub-systems, and components, such as engines and radars instead of major platform' (Bağcı & Kurç 2017, p.45). Despite these changes, Turkey still needs imported parts and technology to be able to produce much of its domestically manufactured arms and licenses to be able to sell them in the global market. For instance, first locally produced helicopter T129 ATAK was built in cooperation with AgustaWestland (an Italian company) and used American-made engines. Similarly, the production of Altay tank and TF-X combat aircraft as well as UAVs depend on imported parts and technology (SIPRI 2020a). Thus, Turkey's ability to export its products which will be produced by using foreign supplied components rely heavily on Turkey's friendly relations with these supplying countries especially since they require export licenses (Bakeer 2019). The importance of this became clear when Turkey's deal with Pakistan for the sale of the T129 ATAK helicopter got halted due to the US's refusal to provide export licenses for the engine used in the helicopter (Bekdil 2018).

The role of NATO countries in the development of the Turkish defense industry is not limited to imported goods and technologies. 'Direct investments and joint ventures' have played an important role in the development of the national defense industry (Kurç 2017). Not just economic calculations but also security calculations play a role in these companies' presence in other countries. A recent study by SIPRI illustrates that 'geopolitical alignment' has an impact on the international presence of arms companies, the fact that Turkey is a NATO member is a crucial reason behind the operation of these firms. According to SIPRI's study, Turkey hosts several 'foreign entities' from NATO countries such as 'BAE Systems, L3Harris Technologies, Leonardo, Lockheed Martin, and Thales' (SIPRI 2020b, 7). International companies' presence in Turkey also takes the form of directly owning companies as we see in Leonardo Turkey Havacılık Savunma ve Güvenlik Sistemleri AŞ (SIPRI 2020a). The active presence of foreign defense companies not only provides the necessary technology for indigenous systems to be developed, but also further contributes to the benefits of NATO membership (Kurç 2017). As it can be observed from the above discussion, NATO membership played a crucial role in the direction and pace of the development that the Turkish defense industry experienced. It is also visible that sustained development is closely linked to continuation of relations with NATO.

4.3 The Rules that Bind: NATO's Coercive Instruments as Obstacles for Turkish Defense Industry

Turkey's dependency on its NATO allies, in general, and the USA, in particular, is not only sustained with the opportunities (such as the reliance on the import of technology, parts from the allies as well as issues of licensing) that the Alliance presents for the Turkish defense industry, but 'sticks' of various forms (economic, political and military) have been used by NATO to remind Turkey of the potential consequences of breaking away from the Alliance. Sanctions and embargoes have been the primary way through which NATO tried to keep Turkey stay in line with NATO's security priorities. For instance, Turkey's involvement in Syria led to not just straining diplomatic relations with NATO countries but also resulted in a ban on arms sales that came after the initiation of Turkish military operation into Syria (Operation Peace Spring) in the Fall of 2019. Several NATO countries including the USA, the UK, France, Germany, Finland, Spain, the Netherlands, Norway, the Czech Republic, and Sweden have placed sanctions on arms sales (Bekdil & Bodner 2019; Koyuncu 2019). Since Turkey still relies on imports, primarily from NATO countries, it harmed Turkey's ability to meet its defense needs.

Another concrete example of the use of coercive capacity was seen after Turkey announced its decision to buy an anti-missile defense system from a Chinese Company that was under US sanctions. The fact that Turkey's existing air defense systems (such as the Hawks, Stingers, Nike Hercules, and Papiers) are both outdated and limited in their ranges makes Turkey rely too heavily on defending Turkish airspace through the patrolling done by F-16 fighter jets (which themselves are aging) (Kibaroğlu 2019). Thus, Turkey's desire to better its air defense system came as no surprise. Turkey tried to fill this gap by deploying Patriots (which were temporarily deployed in 1991, 2003, and 2013) (NATO 2013), but the agreement could not have been reached. In 2009 Turkey issued a call for the purchase of a 'long-range air and missile defense system' and got offers from China, Russia, the USA, and a France-Italian consortium. Turkey first announced its intention to buy an anti-missile defense system from a Chinese state-owned company (China Precision Machinery Import and Export Corporation (CPMEIC)) in 2013 which was not realized eventually. During this process, when ASELSAN asked Merill Lynch, one of the world's biggest investment banks 'to advise and to underwrite its public offering' they were given a rejection stating that 'If it is possible that you will work with the Chinese company… we would not work with you' (Sağlam 2013 cited in Egeli 2019, p.78). This example illustrated how diverging in defense interests from NATO could create reactions not just in the form of direct sanctions and embargoes but also in the form of steps taken to affect Turkish defense companies' ability to function in the global market.

Turkey's later decision to buy S-400's from Russia[7] led NATO to resort to its coercive mechanisms, with more dire consequences. The formerly strained relations warmed up with the failed coup attempt that took place in Turkey on July 15, 2016. President Putin declared his 'unconditional support' for the Turkish government, which was different from the cautious stance that NATO members took at that moment (Aamodt & Haugom 2019). Turkey establishing warmer relations with Russia raised several eyebrows in NATO but the discontent became vocal when Turkey announced its decision to purchase the S-400 missile defense system from Russia.

From NATO's perspective the system's incompatibility with NATO systems[8] and the inconsistency that the S-400s will bring to NATO's defense capabilities constituted the operational concerns about this deal. Any purchase to be made from outside of NATO countries was evaluated as a threat as they could 'jeopardize the integrity of NATO's sensitive command, control, and communication systems as well as its intelligence collecting capability.' (Kibaroğlu 2019, p.165; Kasapoğlu & Ülgen 2019). The fallout of Turkey's decision to buy S-400s from Russia included Turkey's suspension from the US F35 Joint Strike Fighter program to which Turkey not only was contributing through manufacturing various parts for the jets but also was a customer who placed an order for F35 jets. The coercive capacity of the Alliance was encapsulated in a statement made by a NATO official 'The same way that nations are sovereign in making their decisions, they are also sovereign in facing the consequences of that decision' (Defense News 2017).

In addition to being pushed out of the F35 Program, Turkey is now facing US sanctions under the 'Countering America's Adversaries Through Sanctions Act' (CAATSA) 'knowingly engaging in a significant transaction with Rosoboronexport,

[7] 'Turkey Completes Deal to Buy Antimissile System from Russia,' *Associated Press*, December 29, 2017, https://www.nytimes. com/2017/12/29/world/europe/turkey-russia-arms-deal.html.

[8] A spokesperson for the US State Department stated in a briefing in May 2018 that 'Under NATO and under the NATO agreement... you're only supposed to buy... weapons and other material that are interoperable with other NATO partners. We don't see [an S-400 system from Russia] as being interoperable.' 'Turkey: Background and U.S. Relations in Brief,' *Every CRSC Report*, 6 June 2018. (Cited in Kibaroğlu 2019, p.166).

Russia's main arms export entity, by procuring the S-400 surface-to-air missile system' (US Department of State, 2020). While the implications of this decision, is yet to be seen, it is most likely to prioritize the national defense industry on the political rhetoric, while illustrating the difficulties of gaining defense autarky.

It needs to be taken into consideration that while NATO's reaction is fueling the anti-NATO rhetoric, the current S-400 purchase or warm relations with Russia would not provide Turkey enough of a defense capacity to formally distance itself from NATO. First, the S-400s are not 'compatible with NATO standards and cannot be integrated into NATO's air defense system', which Turkey still primarily relies on its defense structure and strategies. Second, Turkey's national know-how is not likely to benefit from their installment as 'Russia is not prepared to supply software codes, IFF systems, a joint production with Turkey and certainly no technology transfer to Turkey' (Kogan 2018, p.29). Thus, while the reasons behind attempts at developing the national defense industry and diversifying its defense capacity through new purchases are understandable, the functioning of the global defense market and Turkey's place in it is likely to not create a shift in Turkey's alliances.

5. Conclusion

This study does neither underestimate the important progress that Turkey has made in developing its national defense industry nor overlook the straining of relations between Turkey and NATO. However, this study highlights that two important factors need to be taken into account before reaching a judgment about Turkey's future in NATO. First, the current problems that Turkey is having with NATO need to be understood from a historical perspective. The history of Turkey-NATO relations is filled with mutual discontent over various policy decisions or lack thereof. While this is not to suggest that nothing could lead to Turkey's departure from NATO, the existing problems are not new or necessarily insurmountable.

Second, it is true that the insecurities Turkey has historically felt in NATO's capability and desire to protect Turkey have contributed to its efforts to develop its national defense industry. However, both the structure of the arms market, that makes being integrated into the global market a precondition for continued growth, and the Turkish national defense industry's, sustained reliance on imports (most importantly in technology) from its Western allies, suggest that continued growth of national defense industry (and increased ability of Turkey to defend itself) is conditioned upon Turkey's sustained commitment to its alliances. Moreover, NATO not only created path dependency by playing a formative role in the trajectory of the Turkish national defense industry's development but also, through repetitive use of its coercive instruments (sanctions and embargoes), NATO tries to sustain that trajectory by making Turkey's attempts to develop its national defense industry independent of the Alliance economically and politically costly.

It would be myopic to suggest that a pragmatic policy choice that prioritizes the further development of the national defense industry would be enough of a reason for Turkey to sustain its commitment to NATO. Turkey's commitment to NATO and NATO's commitment to Turkey is conditioned upon several factors ranging from political to economic and security calculations. Thus, this study does not suggest that Turkey will remain attached to the Alliance despite any problems that might arise. On the contrary, the historical evidence and current affairs suggest that the relations between Turkey and NATO are likely to see reoccurring tensions.

As the historical development of the Turkish national defense industry suggests, sustained tension with NATO members (specifically with the USA) would provide additional impetus for further development of the defense industry. It is also reasonable to assume that the national defense industry which President Erdoğan perceives and portrays as an important component and indicator of Turkey's power (as well as a bargaining chip) in world politics will be used as an explanation (and consolation prize) for Turkey's severance from NATO if such development were to ever happen. However, if Turkey prioritizes the development of the national defense industry in shaping its foreign policy, Turkey's interests will be best served by staying in the Alliance. Since defense autarky is not on the horizon, for both technological and economic reasons, any calls to replace NATO with any other country or alliance needs to be tread lightly as such steps, as far as the national defense industry is concerned, might create new forms of dependence rather than independence.

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