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# Tracing Patterns of Divergence in Arms Trade after the 2022 Russia-Ukraine War: Case Studies of Turkey and India

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**Tracing Patterns of Divergence in Arms Trade after the 2022  
Russia-Ukraine War: Case Studies of Turkey and India**

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## Abstract

What causes states to diverge from their historic alliances/alignments? This paper examines two case studies - Turkey and India - focusing on the degree to which alliances, arms transfers, and conflict alter each state's status quo. Turkey joined the North Atlantic Treaty Organization (NATO) in 1952 to contend with threats emanating from the Soviet Union. Today, Ankara's foreign/defense policy diverges from that of NATO and the West in its effort to regain Ottoman-like control in the region and thus decrease dependence on Western military support. Turkey has transitioned from seeking Western aid and alignment to deter Russian aggression to being the second most powerful army in NATO with a sturdy domestic defense industry that has given it significant regional bargaining power. Initiating controversial arms deals with U.S. and Western adversaries, developing a domestic defense industry, and demonstrating the effectiveness of Turkish defense products in the Russia-Ukraine War, Ankara has decreased its alignment with NATO.

India, along with Australia, Japan, and the United States, formed the Quadrilateral Security Dialogue (more commonly known as the Quad) in 2007 to counter Chinese regional aggression. While the Soviet Union/Russia historically dominated India's arms imports, the 2022 Russia-Ukraine War demonstrated the inferiority of Russian weapons. Further, a declining Russian arms industry threatens arms exports to India and India's domestic security against the People's Republic of China (PRC). Given minimal Russian influence on India's military doctrine, New Delhi is determined to diversify its arms suppliers to become less dependent on Russia and align more with the West and the Quad, thus edging closer to abandoning its decades-long relationship with Russia. Turkey and India are seemingly moving in different directions from their historical ties with NATO and Russia, respectively. By studying these two mid-powers in complicated alliances/alignments, we can see the different routes states take to move away from the status quo.

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# 1. Introduction

In the year since the 2022 Russia-Ukraine War began, the United States has sent \$46.6 billion USD in military aid to Ukraine and has pledged further support. Most states have aligned with the United States in aiding Ukraine to maintain its sovereignty. This support of Ukraine and thus the United States demonstrates the persistence of U.S. hegemony in Europe. Other states have abstained from criticizing Russia's invasion or have explicitly supported it. By studying two mid-powers in complicated alliances/alignments - Turkey and India - we can see the different routes states take to move away from the status quo. Turkey and India are seemingly moving in different directions from their historical ties with NATO and Russia. Using the lens of arms transfers, arms sales, and interdependence, what can we understand about their divergence from two different types of security alliances?

Russian President Vladimir Putin's "special military operation" into Ukraine in February 2022 marked a significant escalation of the conflict that started eight years ago with Russia's annexation of Crimea. The 2022 invasion of Ukraine, a non-NATO member, rattled Europe's security architecture and prompted a serious reevaluation of NATO members' foreign policies and defense commitments. Europe's bloodiest conflict since World War II has complicated twenty-first-century arms transfer agreements and arms dependence dynamics and tested long-standing alliances.

Russia's second invasion of Ukraine pushed Turkey to arm Ukraine alongside its NATO allies. Ankara's support of Ukraine can be viewed as aligning with the West and NATO in the presence of Russian aggression, much as in the Cold War. But Turkey's cooperation with Ukraine is more commercial than ideological: Ukraine is a crucial partner in Turkish arms manufacturing and contributes to the development of Turkey's domestic defense industry. In all other areas of Turkey's foreign/defense policies, there is a distinct divergence from NATO. A binding alliance between states should dictate that all states adhere to maintaining the status quo, but Turkey's desire for a return to Ottoman-like regional

power pushes the state away from NATO and the West. What are the key factors causing Ankara's divergence?

India has a close relationship with Russia while dramatically improving strategic ties with the United States, but Russia's second invasion of Ukraine has made this alignment harder to maintain. As a member of the Quad, India seeks to strengthen ties with the West to counter the PRC. But India's historic arms dependence on the Soviet Union/Russia has a stubborn grip on its defense capability. However, New Delhi views Russian arms exports as below standards and is beginning to diversify arms suppliers. In addition to a reevaluation of its arms dependence, what is causing India's shift away from its historic relationship with Russia?

What causes states to diverge from their historic alliances/alignments? In an attempt to better understand Turkey's shift from and India's shift toward its security alignment with the West, this paper conducts a literature review and generates three hypotheses based on alliances, arms transfers/dependence, and conflict. The case study of Turkey explores each hypothesis to explain Ankara's shift away from aligning with the West: Turkey's binding alliance with NATO and its diverging foreign/defense policies, its budding domestic defense sector with lingering engine dependencies, and the performance of Turkish drones in the Russia-Ukraine War and Russian-Turkish economic cooperation. The case study of India will explore India's growing cooperation with the West and the Quad, its dependence and growing divergence from Russian arms, the Russia-Ukraine War's impact on curtailing Russian exports to New Delhi, and the minimal Russian influence on Indian military doctrine. Lastly, the conclusion offers recommendations for U.S. policy toward Turkey and India moving forward. The United States should prioritize discouraging Turkey's continued collaboration with Russia and other NATO adversaries in the defense sector and must offer conditions that appeal to New Delhi's appetite for more relaxed arms transfers agreements. As Russia continues its war in Ukraine, this paper's information capacity is March 2023.

## 2. Literature Review

What causes states to diverge from their historic alliances/alignments? In the cases of Turkey and India, a combination of three hypotheses related to alliances, arms transfers, and conflict can help explain the states' current predicaments.

### 2.1. First Hypothesis: Alliances

The first hypothesis concerns alliances and the degree to which binding/non-binding alliances and alignments dictate foreign/defense policy of a given state. Assessing the difference between alliances and alignment will shed light on the intensity of commitments Turkey and India make to NATO and the Quad, respectively. NATO and the Quad are two different types of security partnerships: NATO is a formal international institution while the Quad is a non-institutionalized alignment based on common strategic interests. Alignments can be described as the “expectations of states about whether they will be supported or opposed by other states in future interactions.”<sup>1</sup> Such expectations stem from the perceived interests, capabilities, and behavior of other states. Further, alignments are a set of mutual expectations between two or more states that they will have each other's support in disputes or wars with particular other states.<sup>2</sup> Such groupings like strategic partnerships thus materialize as non-institutional alignments based on common interests.

Alliances are “formal associations of states for the use (or nonuse) of military force, in specified circumstances, against states outside their own membership.”<sup>3</sup> They are a “subset of alignments - those that arise from or are formalized by an explicit agreement, usually in the form of a treaty.”<sup>4</sup> More specifically, defense alliances are written pledges between two or more states that are intended to formalize some form of security cooperation. Members in defense alliances pledge to come to each

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<sup>1</sup> Snyder, Glenn H. 1997. *Alliance Politics*. Ithaca, NY: Cornell University Press.

<sup>2</sup> Snyder, Glenn H. “Alliance Theory: A Neorealist First Cut.” *Journal of International Affairs* 44, no. 1 (1990): 103–23.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*

other's aid in the event of external aggression. Alliances deter adversaries by aggregating and, through joint military exercises and operational planning, enhancing capabilities.<sup>5</sup> In such binding alliances, renegeing commitments is costly because it affects a state's ability to negotiate future alliance treaties. There are several reasons states form alliances: states either balance against strong/threatening states or bandwagon with them; ideological or cultural similarities drive states together or apart; and states create allies or proxies by military and economic aid, propaganda, or political penetration.<sup>6</sup>

A state's decision to enter into an alliance is said to reflect a calculation of the trade-off between the increase in security and the decrease in autonomy that accompany alliance membership.<sup>7</sup> Not all aligned states formalize their relationship in an alliance.<sup>8</sup> Strong commitments, such as treaty alliances, worsen the risk of entrapment—that is, the patron's fear of being drafted into an undesirable war. Weak commitments, such as verbal assurances, intensify fears of abandonment—that is, the client's fear of receiving inadequate support should a crisis develop. Such is the traditional alliance dilemma.<sup>9</sup>

## 2.2. Second Hypothesis: Arms Transfers

The second hypothesis concerns arms transfers. To what degree do arms transfers dictate a state's foreign/defense policy? The literature of arms trade in international relations includes numerous studies of dependence at various levels of analysis. Although these theories stand the test of time, much of the writing uses examples from World War I, World War II, and the Cold War. The problem with this is that these theories apply to a different international system: when alliances were different, world wars were being fought, modern weapons technology was only in the developing stages, and the world faced a

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<sup>5</sup> Yarhi-Milo, Keren, Alexander Lanoszka, and Zack Cooper. 2016. "To Arm or to Ally? The Patron's Dilemma and the Strategic Logic of Arms Transfers and Alliances." *International Security* 41 (2): 90–139.

<sup>6</sup> Walt, Stephen M. "Alliance Formation and the Balance of World Power." *International Security* 9, no. 4 (1985): 3–43.

<sup>7</sup> Kinsella, David. 1998. "Arms Transfer Dependence and Foreign Policy Conflict." *Journal of Peace Research* 35 (1): 7–23.

<sup>8</sup> Duffield, John S. 2002. "International Institutions and Interstate Trade: Reassessing the Effects of Alliances and Preferential Trading Arrangements." *International Politics* 39 (3) (09): 271–291.

<sup>9</sup> Snyder, 1997.

bipolar balance of power. In the twenty-first century, states face international relations issues different from the ones they may have faced in the twentieth century. New alliances are formed, weapons systems are more sophisticated, not all states rely on major powers for weapons, and new great powers are rising. Despite these differences, the analyses published in the twentieth century still provide essential theories and foundations for understanding arms dependence dynamics in the twenty-first century, but they do not fully explain the cases of Turkey and India today.

The U.S. Department of State World Military Expenditures and Arms Transfers (WMEAT) 2021<sup>10</sup> report defines arms transfers as follows:

Arms transfers (arms imports and exports) represent the international transfer (under terms of grant, credit, barter, or cash) of military equipment and related services, including weapons of war, parts thereof, ammunition, support equipment, and other commodities designed for military use, as well as related services. Among the items included are tactical guided missiles and rockets, military aircraft, naval vessels, armored and non-armored military vehicles, communications and electronic equipment, artillery, infantry weapons, small arms, ammunition, other ordnance, parachutes, and uniforms. In principle, dual use equipment, which can have application in both military and civilian sectors, is included when its primary mission is identified as military. The building of defense production facilities and licensing fees paid as royalties for the production of military equipment, as well as equipment delivery, maintenance, operating, and training services, are included when they are contained in military transfer agreements. Military services such as training, supply, operations, equipment maintenance or repair, technical

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<sup>10</sup> The 2021 WMEAT, which the Department of State published in December 2021, is the final edition of the WMEAT. Section 5114(b)(4) of the National Defense Authorization Act for Fiscal Year 2022 repealed the 1994 statutory provision that required the Department of State to publish an edition of the WMEAT every year. Consistent with this repeal, the Department of State ceased to produce and publish the WMEAT, see: U.S. Department of State. 2022. "Department of State Announces Publication of 38th and Final Edition of World Military Expenditures and Arms Transfers (WMEAT) - United States Department of State." United States Department of State. August 19, 2022.

assistance, and construction are included where data are available. Excluded are foodstuffs, medical equipment, petroleum products, and other supplies.<sup>11</sup>

This paper uses the WMEAT 2021 definition because it provides an extended explanation that more common, brief definitions do not encompass. These brief definitions use the expression “military equipment usually referred to as conventional” instead of listing the main categories included and excluded, which makes it challenging to determine what should be considered as *arms*. Issues arise with omitting dual-use equipment, technical support for arms production, and services that accompany the transfer of equipment, which may be indispensable for its effective use.

Dual-use equipment—equipment for both military and civilian use like transport aircraft, trucks, or computers—constitutes a gray zone of arms and, therefore, arms transfers. When a state imports or exports such equipment and the final use is not known, it is not clear whether this dual-use equipment is considered an arms transfer. The 2021 WMEAT definition helpfully includes that “dual use equipment, which can have application in both military and civilian sectors, is included when its primary mission is identified as military.”<sup>12</sup>

Additionally, arms transfer agreements also cover the supply of complete weapons systems *and* the related support equipment and services. A central part of arms transfers is the shipment of weapons and weapons systems (e.g., rifles, guns, fighter and attack aircraft, tanks, armored vehicles, missiles) from one state to another. Equally important is the supply of spare parts, support equipment, and ammunition. But there is also a software and training element, which is difficult to identify and classify as arms transfers. Services like technical training and continued technical support (maintenance and repair) are as important as the hardware portion of arms transfers because they provide the basis for the effective use of the arms.<sup>13</sup> “An F-15 fighter, for example, is lethal

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<sup>11</sup> U.S. Department of State. 2021. “Sources, Data, and Methods of WMEAT 2021.”

<sup>12</sup> U.S. Department of State, 2022.

<sup>13</sup> Catrina, Christian. 1988. *Arms Transfers and Dependence*. Geneva, Switzerland: UNIDIR, Taylor & Francis, pp. 10.

only if it has proper runways, if the pilots have proper training, and if the ground crews have been trained and provided with major technical services.”<sup>14</sup> Arms transfers are not just physical; the training and expertise for a given weapons system can only be provided by the state that manufactured the weapon.<sup>15</sup> As such, the degree of arms dependence cannot be measured in just physical transfer of arms but must also be measured in terms of training, software, and then subsequent physical needs like spare parts. The nuances in the 2021 WMEAT definition of arms transfers are essential to understand how a state can become dependent on arms exports.

Arms dependence can be described as states becoming dependent on the suppliers of foreign arms for their armed forces and vice versa, when arms producers and suppliers depend on international arms exports for profit.<sup>16</sup> More specifically, according to dependence theory, recipient dependence refers to the costs (which in the broadest sense include economic, political, and military costs) that one or several suppliers can incur by refusing to supply weapons, by delaying the transfer of ordered equipment, or by downgrading or terminating supplies and technical support necessary to keep the weapons operational.<sup>17</sup> Arms dependence can also be framed in terms of costs and benefits: the arms recipient derives direct benefits from its relationship with its supplier in that its perceived need for weaponry is fulfilled. The supplier derives no direct benefits, only costs. Dependence, then, is the “currency” that settles these accounts.<sup>18</sup>

One leading theory suggests that recipient arms dependence is based on seven main arms transfer determinants: 1.) *The recipient's threat perception*: if the recipient government perceives its military capabilities important to prevent an imminent attack or to fight a conflict successfully, then the cost of not

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<sup>14</sup> Hammond, Paul Y., David J. Louscher, and Michael D. Salomone (1979): "Growing Dilemmas for the Management of Arms Sales." In: *Armed Forces and Society*, Vol. 6, No. 1, pp. 1-21.

<sup>15</sup> This is true unless the arms transfer agreement details the co-development of the weapons system and trains the recipient state in maintaining the transferred equipment. But the Indo-Russian co-development of weapons systems can still render the recipient dependent on maintenance and software.

<sup>16</sup> Catrina, 1988, pp. 1.

<sup>17</sup> *Ibid*, 354.

<sup>18</sup> *Ibid*.

receiving arms or losing technical support is immediate and high.<sup>19</sup> 2.) *Self-sufficiency*: if most important weapons systems are produced domestically, delays and interruptions of outside supplies will have a limited impact.<sup>20</sup> 3.) *The ability to initiate/expand domestic arms production*: if a state can easily and quickly substitute domestically produced weapons for imported ones, it can limit the costs of a supply cut-off.<sup>21</sup> 4.) *Diversification*: if the recipient has spread its arms import evenly across several different suppliers, each supplier will only cause limited costs.<sup>22</sup> 5.) *The availability of alternative suppliers*: a recipient's potential for supplier diversification rests on the number of alternative suppliers available, the recipient's financial resources, its ideological flexibility, and the ability of the recipient's armed forces to convert to alternative systems.<sup>23</sup> 6.) *Self-sufficiency of spare parts for imported weapons systems*: producing the necessary parts domestically can reduce or eliminate the costs associated with a delay or cutoff in the supply of spare parts.<sup>24</sup> 7.) *Self-sufficiency in maintenance, overhaul, and repair of imported weapons systems*: if the recipient state has the necessary knowledge, personnel, and installations, the costs of a withdrawal of technicians or a refusal by the original manufacturer to accept weapons systems for overhaul and repair can be mitigated or avoided altogether.<sup>25</sup> These determinants vary in weight according to the stage of the arms transfer. Determinant 6 and 7 refer to only post-delivery dependence whereas determinant 5 only concerns pre-delivery dependence.

These determinants help explain how arms transfers can both avoid and create dependence. Governments of states not producing the whole range of armaments can acquire the means they consider necessary for self-defense through arms transfers, thus bolstering their sense of independence. Just as arms transfers can diminish a recipient's dependence by strengthening its capability to withstand political-military pressures,

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<sup>19</sup> Ibid.

<sup>20</sup> Ibid, 355.

<sup>21</sup> Ibid.

<sup>22</sup> Ibid.

<sup>23</sup> Ibid.

<sup>24</sup> Ibid.

<sup>25</sup> Ibid.

they also carry potential for creating or increasing dependence on its suppliers of arms.<sup>26</sup> As such, the import of arms is inherently a double-edged sword.

How do arms transfers then coincide with alliances? The patron-client framework demonstrates how great powers (or “Patrons”) calibrate the provision of security goods to serve their interest while managing their clients’ behavior.<sup>27</sup> As security commitments change over time, patrons assess the degree of shared threat and the local balances of capabilities in determining whether to support their clients with arms, alliance commitments, or both.<sup>28</sup> The Patron’s Dilemma is a key theoretical framework for arms dependence that helps explain the connection between alliances and arms transfers. However, the patron-client framework does not apply to all cases of great power arms transfer partnerships. Instead, security assistance rarely gives major powers leverage over their junior partner allies.<sup>29</sup> Junior partners are often successful in constraining the behavior of major power partners and extracting additional resources from them. This argument better explains India’s arms dependence on Russia.

Additionally, states can often balance against threats by choosing a mix of arms and alliances according to the relative costs associated with each and the level of their allies’ military capability.<sup>30</sup> States tend to rely on their allies’ arms when allied support is relatively cheap and their allies are militarily strong, whereas they tend to rely on their own capabilities when allied support is relatively costly and their allies are militarily weak.<sup>31</sup> But alliances are not necessarily preferable to arms acquisition, even if they permit

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<sup>26</sup> Using global arms trade data, Catrina estimates the share of arms exports, relative to arms production, for twenty suppliers from 1963 to 1987. His data examination concludes that a state is dependent on arms exports when it exports more than one-fourth of its defense industry production, see: Catrina, 1988, pp.1.

<sup>27</sup> *To Arm or To Ally? The Patron’s Dilemma and the Strategic Logic of Arms Transfers and Alliances* dives into the dynamics of arms suppliers and clients in arms dependency. Using case studies of arms transfers to describe different relationships between major power states and their clients, Yahri-Milo et al. frame their discussions of arms transfers by the United States to Israel and Taiwan using the logic of the “Patron’s Dilemma” outlined by Glenn Snyder in 1997, see: Yarhi-Milo et al., 2016.

<sup>28</sup> Yarhi-Milo et al., 2016.

<sup>29</sup> Spindel, Jennifer. “Arms for Influence? The Limits of Great Power Leverage.” *European Journal of International Security*, 2023, 1–18.

<sup>30</sup> Sorokin, Gerald L. 1994. “Arms, Alliances, and Security Tradeoffs in Enduring Rivalries.” *International Studies Quarterly* 38 (3): 421.

<sup>31</sup> Sorokin used econometric analysis of data on France and Austria prior to World War I and Israel and Syria in the 1990s to come to this conclusion, see: Sorokin, 1994.

states to spend less money on military capabilities. A state's divergence from alliance commitments forces it to generate its own arms for greater autonomy. This theory can help explain Turkey's current predicament as a mid-power bolstering its domestic defense industry despite being in a binding security alliance.

### 2.3. Third Hypothesis: Conflict

The third hypothesis concerns conflict. To what degree do conflicts dictate a state's foreign/defense policy? Why might a state choose to arm itself over committing to its existing alliance? Arming is seen as an alternate means to increase a state's security, but alliances and armament policies do not form in isolation from one another; instead, these sources of security provide various paths states can pursue when faced with external threats.<sup>32</sup> Domestic politics determine the costs of each course while the external environment determines the demand for an increase in security. As such, security strategies never rely on just arming or alliances; states always pursue a combination of both.<sup>33</sup> But more importantly, when a state can improve its military rapidly, the appetite for arms increases. When a state is renovating its forces, it is unlikely to tighten its alliance commitments out of fear of being entrapped in a war before being ready.<sup>34</sup>

To what degree do arms transfers and arms transfer dependence interact to affect foreign policy conflict? Arms transfers can increase the tendency of the recipient to strike a conflictual posture in its foreign policy while arms transfer dependence restrains that tendency.<sup>35</sup> Furthermore, while a state may benefit from increased military capability through arms imports, this increased dependence also raises the possibility that the state's military capability may be undermined by embargoes or other restrictions on the transfer of armaments, particularly during times of heightened perceived threats to national security.<sup>36</sup>

Therefore, dependence increases the possibility that arms shipments will be curtailed by states just when

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<sup>32</sup> Morrow, James D. 1993. "Arms versus Allies: Trade-Offs in the Search for Security." *International Organization* 47 (2): 207–33.

<sup>33</sup> *Ibid.*

<sup>34</sup> Sorokin, 1994, pp. 231.

<sup>35</sup> Kinsella, 1998.

<sup>36</sup> Kinsella, 1998.

they are most needed during regional crises. Previous research from the Cold War era indicates that hegemonic suppliers like the United States and the Soviet Union sought to restrain their clients during periods of regional instability.

Studies of arms transfers and arms dependence and their alliance tradeoffs have been executed by a few theorists, with key examples elaborated upon above. This paper utilizes these foundational theoretical frameworks of alliances, arms transfers, and conflict to assess Turkey's divergence from NATO and India's alignment toward the Quad given Russia's 2022 invasion of Ukraine. However, the cases of Turkey's and India's arms dependency and security alliance dynamics in the twenty-first century do not fit into just one theoretical framework or explanation. Mid-powers Turkey and India are specifically chosen because of their Cold War history with the Soviet Union and their more recent collaboration with the United States and the West (to varying degrees). In examining Turkey's and India's foreign policy objectives, their domestic defense industries, their controversial stances in the Russia-Ukraine War, and overall trends in arms imports and exports, this thesis will provide the groundwork for assessing the implications of Turkey and India's divergence from their historical alliance or alignment relationships. Further, it will illuminate key areas the United States must assess as it seeks to develop bilateral and multilateral relations with these two states.

### 3. The Case of Turkey

Turkey's divergence from the foreign/defense policy of NATO and the West stems from actions taken to become less reliant on Western support and therefore gain control over its arms dependence on the West. Turkey struck controversial arms deals with Western adversaries, advanced its domestic defense industry, engaged in regional conflict against the status quo of NATO and the United States, and continues to pursue foreign/defense policies that do not align with NATO's. The arms transfer hypothesis explains that these changes to Turkey's status quo in NATO were possible because Turkey decreased its arms dependence on the West. As the second largest army in NATO, Turkey now has the power to carry out regional change. Additionally, the Russia-Ukraine War magnifies the effectiveness of Turkey's defense products in conflict, demonstrating to arms trade partners that Turkish weapons systems are highly effective in battle. This conflict provides the essential push Turkey needs to generate more arms exports and minimize arms dependence on the West. Turkey's arms independence and its military self-sufficiency have reduced the significance of NATO membership.

#### 3.1. Alliance Dynamics

##### 3.1.1. Turkey's Alliance Dynamics in the North Atlantic Treaty Alliance

NATO is a transatlantic security alliance of thirty<sup>37</sup> like-minded North American and European countries that was founded in 1949 to prevent Soviet expansionism, counter the resurgence of nationalist militarism in Europe by maintaining a strong North American presence on the continent, and promote political integration in Europe.<sup>38</sup> NATO has a binding commitment of Article 5 that "an armed attack against one

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<sup>37</sup> Founding Members (1949): Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, Netherlands, Norway, Portugal, United Kingdom, United States; Cold War Expansion: Greece, Turkey(1952), West Germany (1955), Spain (1982); Post-Cold War Expansion: Germany (1990), Czech Republic, Hungary, Poland (1999), Bulgaria, Estonia, Latvia, Lithuania, Romania, Slovakia, Slovenia (2004), Albania, Croatia (2009), Montenegro (2017), North Macedonia (2020), see: Kinsella, David. 1998. "Arms Transfer Dependence and Foreign Policy Conflict." *Journal of Peace Research* 35 (1): 7–23. <https://www.jstor.org/stable/425228>.

<sup>38</sup> North Atlantic Treaty Organization. 2022. "A Short History of NATO." North Atlantic Treaty Organization. North Atlantic Treaty Organization. June 3, 2022. [https://www.nato.int/cps/en/natohq/declassified\\_139339.htm](https://www.nato.int/cps/en/natohq/declassified_139339.htm).

or more [NATO members] in Europe or North America shall be considered an attack against them all.”<sup>39</sup>

Currently, NATO's primary objective is to enhance security and stability in the Euro-Atlantic region by means of deterrence and defense, crisis management, and cooperation in security matters. It remains the pillar of U.S.-European military cooperation.

Turkey has been one of the most important members of NATO since its accession to the alliance in 1952. After World War II, Ankara wanted to join NATO because it did not have the means to withstand territorial claims from the Soviet Union. During the Cold War, Turkish foreign and security policies aligned with other NATO members because they shared the Soviet Union as the common enemy. During this period, Ankara feared being abandoned by NATO more than it feared being entrapped in alliance politics. But the narrative changed when the Soviet Union fell, and the Cold War ended. The international system became multipolar and gradually rendered Turkey's previous NATO-centric and unidimensional foreign/defense policies obsolete. As Turkey began reaching out to non-Western states, its maneuvering capability and capacity to help shape regional developments increased. The need for a collective defense organization like NATO lost its appeal to Ankara with the absence of the Soviet threat. Any remaining previous regional threats in Bosnia and Kosovo were similarly no longer of concern when the Balkan states joined NATO.

Today, Turkey possesses the second-largest armed forces in the alliance after the United States, hosts U.S. and NATO military infrastructure, and protects NATO's southeastern flank.<sup>40</sup> But Ankara continues to pursue foreign/defense policies that frequently clash with the interests of other NATO members. The reigning Justice and Development Party (AKP) and Turkish President Recep Tayyip Erdoğan are key factors in this change. Erdoğan has made improving relations with neighboring states a priority and views

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<sup>39</sup> The North Atlantic Treaty Organization. 1949. “The North Atlantic Treaty.” The North Atlantic Treaty Organization. The North Atlantic Treaty Organization. April 4, 1949.

<sup>40</sup> International Institute for Strategic Studies. 2019. “Turkey and NATO.” International Institute for Strategic Studies. December 2019.

Turkey as the “inheritor of the Ottoman Empire”<sup>41</sup> that should adopt a Turkey-centric worldview in defining national interests and policies.<sup>42</sup> The AKP believes that the improvement of its relations with its neighbors is critical for risk-management and that a principally NATO-oriented foreign/defense policy would likely fail in realizing Ankara’s regional goals.<sup>43</sup>

Turkey has also adopted a critical stance toward the expansion of NATO. Ankara’s primary goal is to prevent NATO’s transformation from negatively affecting its relations with its neighbors. In numerous instances, Ankara has evaluated NATO security advancements in the context of its neighbors’ perspectives. For example, Turkey evaluates the development of NATO’s missile defense shield systems while keeping its relations with Iran and Russia at the forefront. If some parts of the missile defense system were installed in Turkish territories, Iran could see this as a threat and therefore adopt a more hostile attitude towards Ankara. In terms of Russia, Turkey believes that Russia’s concerns should be accounted for when developing NATO’s missile defense shield systems. Turkey’s cooperation with Western adversaries prevents it from fully aligning with NATO. Ankara’s post-Cold War attitude towards NATO shows that it is now more afraid of being entrapped by NATO policies than it is of being abandoned by NATO. Consequently, Turkey’s dependence on NATO as a source of security and identity has decreased.

### 3.1.2. Deteriorating U.S.-Turkey Relations

The United States has recognized Turkey as a crucial ally since the 1950s. During the Cold War, U.S.-Turkish security cooperation played a critical role in containing the Soviet Union. Since then, the overarching threat the Soviet Union posed to both states ensured that any difficulties, crises, and irritants never broke the bilateral relationship or tested Turkey’s NATO membership. However, U.S.-Turkish tensions increased over the last half-century due to arms transfers and arms embargoes. U.S. arms

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<sup>41</sup> Oğuzlu, Tarik. 2013. “Turkey and NATO.” Antalya International University. 2013.

<sup>42</sup> Ibid.

<sup>43</sup> Ibid.

embargoes catalyzed Turkey's shift to create its own arms and domestic defense industry. John F. Kennedy administration's withdrawal of Jupiter missiles from Turkey in April 1963, the 1964 letter from President Lyndon B. Johnson to Prime Minister Ismet Inonu warning Turkey not to "intervene and occupy" Cyprus, Turkey's occupation of that country in 1974,<sup>44</sup> and the U.S. arms embargo in response initially spurred Turkey's desire to establish its arms independence. U.S.-Turkish relations have only worsened in the past decade. Bilateral relations are difficult under Erdoğan and the AKP. Turkey has increased repressive policies domestically, targeted the American's Syrian Kurdish allies, aided Iran in evading sanctions, and purchased an advanced air defense system from Russia. The United States responded with various sanctions and cut Turkey off from the F-35 program, halting Turkey's defense imports.

#### A. Erdoğan and the AKP

Erdoğan's ascent to power in 2002 marked a significant transformation in Turkey's political landscape. Over the last two decades, Erdoğan transformed Turkey from a Western-oriented secular republic into an authoritarian regime with a democratic façade. Specifically, the AKP's restrictions on freedom of expression and media censorship, limitations on civil society organizations, treatment of political opponents and minority groups, authoritarian tendencies, and economic challenges such as inflation and debt signal significant divergence from NATO ideals. The AKP relentlessly cracks down on dissenting voices by restricting freedom of expression and censoring the media. Journalists, activists, and academics have been arrested; media outlets have been shut down or taken over by the government; limitations on civil society organizations have complicated NGO efforts. Turkey has been criticized for its treatment of political opponents and ethnic/religious minorities, particularly the Kurdish population, with reports of human rights violations against Kurdish militants. Erdoğan has concentrated power and limited checks and balances, stifling democracy and the rule of law. Turkey has also faced economic challenges,

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<sup>44</sup> Cook, Steven. 2018. "Neither Friend nor Foe: The Future of U.S.-Turkey Relations." Council on Foreign Relations. 2018.

including rising inflation, high levels of debt, and a weakening currency, which have raised concerns about the government's management of the economy and the rise of corruption and cronyism.

### *B. Branching out to Western Adversaries*

Erdoğan's aggressive and expansionist ambitions have provoked or escalated conflicts with nearly all of Turkey's neighboring countries. Since 2017, Ankara has also cooperated with U.S. adversaries like Russia, Iran, and Venezuela, and has provided a safe haven for Hamas while ignoring the activities of terror financiers associated with Al-Qaeda and the Islamic State.<sup>45</sup> Erdoğan has also utilized Turkish military and proxy forces in the Eastern Mediterranean and Middle East to confront its NATO allies and regional partners. A key component of the deterioration of U.S.-Turkish relations is the Turkish targeting of U.S.-Syrian Kurdish allies. In 2017, Erdoğan deployed Turkish troops to attack the Syrian Democratic Forces (SDF), an alliance mainly composed of Kurds who are a crucial U.S. partner in the fight against the Islamic State. Erdoğan's indirect hostility toward the United States is seen as an attempt to divert attention from his administration's corruption, economic mismanagement, and repression of opposition.<sup>46</sup> The U.S. military withdrawal from Syria in October 2019 gave a green-light to Erdoğan's incursion and resulted in brutalities against civilians, paving the way for the return of Russian forces to northeast Syria.<sup>47</sup> Erdoğan has also taken U.S. citizens hostage as bargaining chips in negotiations with Washington. In 2017, the AKP sought to secure the release of Turkish-Iranian gold trader Reza Zazaab from prosecution by the U.S. Department of Justice. Zazaab carried out one of the most expensive sanctions-evasion schemes in history, which involved the illegal transfer of tens of billions of dollars to Tehran. Ankara held a North Carolina pastor, a NASA scientist, and a chemistry professor hostage in an attempt to aid Iran in evading U.S. sanctions. Ankara's coziness with Western adversaries has strained its relations with the United States and put it in conflict with NATO as a whole.

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<sup>45</sup> Erdemir, Aykan, and Brenna Knippen. 2019. "Treasury Sanctions an Islamic State Network in Turkey – for the Third Time This Year." Foundation for Defense of Democracies. November 20, 2019.

<sup>46</sup> Kleinman, Danielle. 2021. "Turkey." Foundation for Defense of Democracies. Foundation for the Defense of Democracies. January 14, 2021.

<sup>47</sup> Ibid.

C. Russian S-400 and U.S. F-35

Turkey's acquisition of the Russian S-400 fourth generation surface-to-air defense system, which it ordered in 2017 and Russia delivered in 2019,<sup>48</sup> created significant implications for Turkey's relations with Russia, the United States, and other NATO countries. Moreover, the acquisition of the S-400 instigated Western retaliation against Turkey, which increased Turkey's motivation to pursue a stronger domestic defense industry and become less reliant on foreign arms transfers.

The Trump administration removed Turkey from the Lockheed Martin F-35 Joint Strike Fighter program in July 2019 as a direct result of the Russian S-400 transaction, given concerns that the S-400 would compromise the F-35's stealth capabilities. Many NATO nations placed orders for the F-35, a fifth-generation stealthy strike-fighter aircraft with a capable integrated sensor suite. NATO and U.S. officials were concerned that Turkey's deployment and operation of the S-400 would expose at least some of the F-35's highly classified features to Russian intelligence gathering.<sup>49</sup> Under Secretary of Defense Ellen Lord stated that "Turkey cannot field a Russian intelligence collection platform in proximity to where the F-35 program makes, repairs, and houses the F-35."<sup>50</sup> The six 100 F-35A Lightning II aircraft Turkey intended to acquire remained in the U.S. and were subsequently subsumed into the U.S. Air Force.<sup>51</sup> Refusing to sell arms is a major political act that appears as a calculated insult, reflecting on the stability, trust, credit-worthiness, or technical competence of the would-be-recipient.<sup>52</sup> This is especially noteworthy because Turkey manufactured more than nine hundred parts for the F-35. Both the U.S.

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<sup>48</sup> Gumrukcu, Tuvan, and Ece Toksabay. 2017. "Turkey, Russia Sign Deal on Supply of S-400 Missiles." Reuters, December 29, 2017.

<sup>49</sup> International Institute for Strategic Studies. 2019a. "Turkey, the S-400 and the F-35." International Institute for Strategic Studies. August 2019.

<sup>50</sup> U.S. Department of Defense. 2019. "Under Secretary of Defense for Acquisition and Sustainment Ellen M. Lord and Deputy under of Defense for Policy David J. Trachtenberg Press Briefing on DOD's Response to Turkey Accepting Delivery of the Russian S-400 Air and Missile Defense System." U.S. Department of Defense. July 17, 2019.

<sup>51</sup> Jennings, Gareth. 2023. "US, Turkey Continue Talks to Settle F-35 Dispute." Janes. Janes Information Group. January 24, 2023.

<sup>52</sup> Freedman, Lawrence (1978): "Britain and the Arms Trade." In: International Affairs (London), Vol. 54, No. 3, pp. 377-392.

program and Turkish firms suffered. The adjustment will cost Washington \$500-\$600 million USD in the near-term and will ultimately cost Turkish firms billions of dollars in lost revenues.<sup>53</sup>

Fundamentally, the S-400 cannot be integrated into NATO's military architecture. NATO's collective defense pledge constitutes that allies integrate their ships, aircrafts, and weapons systems as a cohesive front to share command across the alliance. Turkey's purchase of the S-400 had a detrimental impact on Turkish interoperability within the alliance. Ankara's shift toward seeking defense independence is worrisome for NATO because its military is strong, it hosts allied military assets and personnel, and it carries out policing missions with F-16s in the Baltics, Poland, and elsewhere on behalf of the United States and NATO.<sup>54</sup>

The Trump administration delayed imposing sanctions on Turkey for acquiring the Russian S-400 believing it could convince Turkey to replace the S-400 with the U.S. Patriot surface-to-air defense systems. But the United States imposed sanctions under the Countering America's Adversaries Through Sanctions Act (CAATSA) on Turkey's defense procurement agency (SSB) in December 2020 after Turkey test-fired the S-400 in October 2020.<sup>55</sup> The U.S. Department of State stated that these sanctions "are not intended to undermine the military capabilities or combat readiness of Turkey or any other U.S. ally or partner, but rather to impose costs on Russia in response to its wide range of malign activities." Erdoğan condemned the sanctions: "For the first time, [sanctions] have been imposed on our country, a NATO member. What kind of alliance is this? This decision is a blatant attack on our country's

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<sup>53</sup> International Institute for Strategic Studies, 2019a.

<sup>54</sup> North Atlantic Treaty Organization. 2021. "Turkey, United States Take up NATO Air Patrols." North Atlantic Treaty Organization. July 7, 2021.

<sup>55</sup> Sanctions include 1.) a prohibition on granting specific U.S. export licenses and authorizations for any goods or technology; 2.) a prohibition on loans or credits by U.S. financial institutions totaling more than \$10 million in any 12-month period; 3.) a ban on U.S. Export-Import Bank assistance; 4.) a requirement for the United States to oppose loans benefitting SSB by international financial institutions; and 5.) full blocking sanctions and visa restrictions on four SSB officials. Additionally, Section 1245 of the FY2020 National Defense Authorization Act prohibits the use of U.S. funds to transfer F-35s to Turkey unless the Secretaries of Defense and State certify that Turkey no longer possesses the S-400, see: Congressional Research Service. 2020. "CRS INSIGHT Prepared for Members and Committees of Congress Turkey: U.S. Sanctions under the Countering America's Adversaries through Sanctions Act (CAATSA)." Congressional Research Service.; U.S. Department of Defense, 2019.

sovereignty rights.”<sup>56</sup> He also reaffirmed Turkish sovereign efforts to establish an independent defense industry.

Ankara seeks the ability to make independent strategic decisions in the Mediterranean and other areas where there are disputes with the West, such as Syria. It does not want to feel constrained in determining its regional alignment by U.S. threats to cease arms sales. The U.S. removal of Turkey from the F-35 deal reinforced Turkey’s need for a domestic defense industry to decrease dependence on Western allies.

### 3.2. Turkish Domestic Defense Industry

For decades, Turkey relied on U.S.-origin and Western equipment like aircraft, helicopters, missiles, and other munitions to maintain military strength. Ankara has procurement and co-development relationships with other NATO allies, including Germany (submarines), Italy (helicopters and reconnaissance satellites), and the United Kingdom (a fighter aircraft prototype). Turkey’s occupation of Cyprus in 1974 and the subsequent U.S. arms embargo instigated the initial shift in Turkish defense goals, thus creating a domestic defense industry. Today, the growing Turkish defense industry gives Ankara greater maneuverability in its foreign policy by ensuring less reliance on arms imports and generating more autonomy. Additionally, its expanded exports have grown the country’s geopolitical outreach and defense diplomacy capacity.

In recent years, Western states have become less interested in selling weapons and components to Turkey due to Ankara's severe human rights violations and aggressive foreign policies, which have strained its relationship with NATO allies. Several Western governments, such as the United States, Canada, Germany, France, Spain, Sweden, and Austria, have imposed export limitations on Turkey, leading Ankara to seek alternative sources and develop its own advanced weapons industry. Turkey's growing autonomy in defense capabilities, as reflected by its export/import of military equipment from NATO

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<sup>56</sup> Alhas, Ali Murat. 2020. “US Sanctions ‘Blatant Attack’ on Turkey: President.” Anadolu Agency. December 16, 2020.

adversaries and the development of a domestic defense industry, highlights the benefits of reducing reliance on foreign arms through arms transfers.

Turkey's advancing domestic defense capability exemplifies the determinants of self-sufficiency:

Determinant 2 - if most important weapons systems are produced domestically, delays and interruptions of outside supplies will have a limited impact; Determinant 3 - the ability to initiate/expand domestic arms production allows for easy and quick domestic weapons substitution in a foreign weapons supply-cut off; Determinant 6 - self-sufficiency of spare parts for imported weapons systems reduces or eliminates the costs associated with a delay or cutoff in the supply of spare parts; and Determinant 7 - self-sufficiency in maintenance, overhaul, and repair of imported weapons systems.

### 3.2.1 Growth of Military Exports

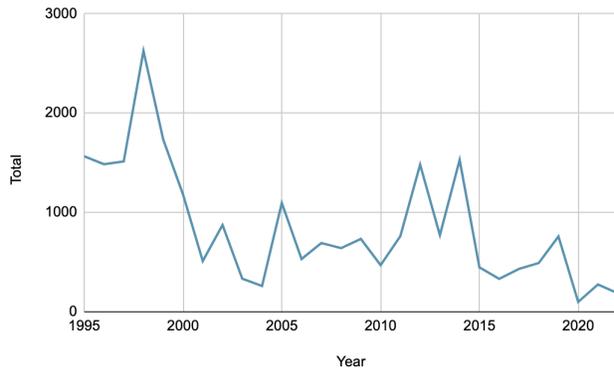
The domestic production of advanced weapon systems has significant propaganda value, allowing Erdoğan to claim he is restoring Turkey to great-power status, reminiscent of the Ottoman Empire.<sup>57</sup> Moreover, a strong domestic arms industry has the potential to lift Turkey's struggling economy by boosting exports. Rapid success in domestic defense production can also be attributed to Erdoğan's consolidation of defense firm executives. Previously, the defense industries were linked to the pro-secular military. Erdoğan's government removed pro-secular board members and executives from state defense firms, replaced them with AKP loyalists, and established a group of private defense firms owned by his supporters through nationalization and subsequent re-privatization under new ownership.<sup>58</sup> Figures 1 and 2 demonstrate how Turkey's foreign imports have declined while its exports have increased.

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<sup>57</sup> Erdemir, Aykan, and Ryan Brobst. 2022. "Engines of Influence: Turkey's Defense Industry under Erdogan." Foundations for the Defense of Democracies. March 24, 2022.

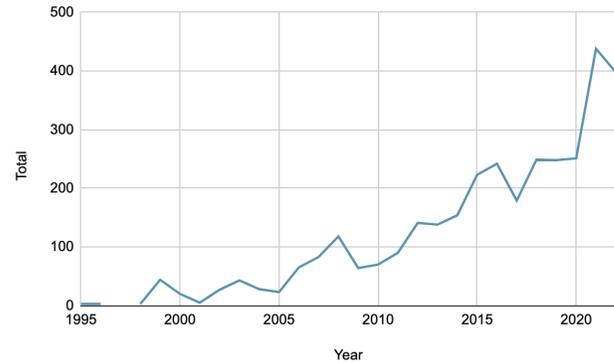
<sup>58</sup> Bekdil, Burak Ege. 2017. "Turkey's Erdogan Decrees Sweeping Defense Procurement Takeover." Defense News. December 27, 2017. ; and Erdemir and Brobst, 2022.

**Figure 1:** Turkey’s Arms Imports 1995-2022 in TIVs expressed in Millions USD



**Source:** SIPRI TIV Arms Transfer Database

**Figure 2:** Turkey’s Arms Exports 1995-2022 in TIVs expressed in Millions USD



**Source:** SIPRI TIV Arms Transfer Database

According to data from the Stockholm International Peace Research Institute (SIPRI), Turkey is the twelfth largest arms exporter in the world, seeing a 69 percent increase of exports from 2013-2017 (0.6 percent of global arms exports) to 2018-2022 (1.1 percent of global arms exports).<sup>59</sup> Its top recipients are Qatar (20 percent), the United Arab Emirates (17 percent), and Oman (13 percent). In 2022, Turkish defense exports were valued at more than \$4 billion USD, up from \$3.1 billion USD in 2021.<sup>60</sup> Turkish industries can manufacture, update, and sell various types of conventional weaponry and equipment, including corvettes, fire support systems, unmanned aircraft systems, gliding munitions for drones, joint-direct attack munitions, a wide range of land warfare platforms (excluding main battle tanks), grenade launchers, and tactical anti-material rifles, with differing degrees of domestic contribution.<sup>61</sup>

While Turkey is the 19th largest importer of arms, 2022 SIPRI statistics demonstrate a 49 percent decrease in the share of global arms imports.<sup>62</sup> Turkey’s percent share of global arms imports decreased from 2.4 percent in 2013-2017 to 1.3 percent in 2018-2022 with the top importers being Italy (35

<sup>59</sup> Stockholm International Peace Research Institute. 2023. “Trends in International Arms Transfers, 2022.” Stockholm International Peace Research Institute. March 2023.

<sup>60</sup> GlobalData PLC. 2023. “Growing Turkey’s Domestic Defence Industry.” Airforce Technology. February 13, 2023.

<sup>61</sup> Wilson, Grady. 2022. “Transforming from Arms Importer to Trendsetter: Assessing the Growth of Turkey’s Defense Industries.” Atlantic Council. December 22, 2022.

<sup>62</sup> Stockholm International Peace Research Institute, 2023.

percent), Spain (20 percent), and Russia (19 percent).<sup>63</sup> In Figure 1, there are several data points to examine in Turkish arms imports: in 2004, Turkey’s Executive Committee of Defense Industries canceled several acquisition projects worth a total of \$11 billion USD in conventional war-fighting assets.<sup>64</sup> By undertaking the manufacturing contracts domestically, Ankara hoped that Turkey would generate export capacity in a variety of weapons systems and encourage increased national industrial involvement. Additionally, the downtick in Turkish arms imports in 2020 can be attributed to the COVID-19 pandemic and the U.S. CAATSA sanctions implemented in December 2020 for purchasing the Russian S-400.

### 3.2.2. Export and License Restrictions and Engine Dependence

#### A. Export and License Restrictions

Assertive Turkish foreign policy and military aggression abroad, specifically the use of Turkish drones in conflicts with heavy civilian casualties and Turkey’s shift towards Russia, have led key NATO allies and other Western states to impose export and licensing restrictions on Ankara. Figure 3 illustrates current international export and license restrictions on Turkey.

**Figure 3:** International Export and License Restrictions on Turkey

Country	Items Embargoed	Reason	Notes
Canada and Austria	Light-weight engine used in Turkish Bayraktar TB-2 drones	Turkish drones used in Nagorno-Karabakh conflict	Under Canadian BRP decision following protests in Canada and Austria.
Canada	Overall military goods and technologies	Turkish violation of end-user assurances <sup>65</sup>	Most impacted are camera optics <sup>66</sup> used in Turkish Bayraktar TB-2 drone
Czech Republic	Complete arms embargo <sup>67</sup>	Pursuant to EU-wide posture; Turkish military intervention in northern Syria	

<sup>63</sup> Ibid.

<sup>64</sup> Specifically, the Committee decided to cancel the current tenders for the modern tank (German Leopard, French Lecrec, American Abrams), attack tactical reconnaissance helicopter, and UAV projects, see: Hurriyet. 2004. “Tank ve Helikopter Ihaleleri Iptal Edildi.” Wwww.hurriyet.com.tr. May 14, 2004.

<sup>65</sup> “After US Sanctions, Turkey Faces Arms Embargo from Canada over Violation of Drone Norms.” 2021. EurAsian Times. April 13, 2021.

<sup>66</sup> Bekdil, Burak Ege. 2021d. “How Turkey Bypasses Western Arms Embargoes.” Begin-Sadat Center for Strategic Studies. July 2, 2021.

<sup>67</sup> “The Czech Republic Has Imposed an Arms Embargo on Turkey, Following Other EU Member States.” 2019. CZ Defence: Czech Army and Defence Magazine. October 16, 2019.

Finland	Complete arms embargo <sup>68</sup>	Pursuant to EU-wide posture; Turkish military intervention in northern Syria	
Germany	Limiting arms sales to Turkey; <sup>69</sup> German bureaucratic slow-rolling of MTU engine for Turkish nextgen battle tanks; <sup>70</sup> Germany halts plans to upgrade Turkish Leopard II tanks <sup>71</sup>	Pursuant to EU-wide posture; Turkish military intervention in northern Syria	Germany has so far continued the production and sale of six Type 214 submarines to Turkey, to be delivered starting 2022. <sup>72</sup> Other deals halted without an official arms embargo.
Netherlands	Ban on new exports, hold on existing licenses <sup>73</sup>	Pursuant to EU-wide posture; Turkish military intervention in Northern Syria	
Norway	Complete arms embargo <sup>74</sup>	Pursuant to EU-wide posture; Turkish military intervention in Northern Syria	
Spain	Ban on new exports <sup>75</sup>	Pursuant to EU-wide posture; Turkish military intervention in Northern Syria	
Sweden	Complete arms embargo <sup>76</sup>	Pursuant to EU-wide posture; Turkish military intervention in Northern Syria	
United States	Expulsion from F-35 fighter program; Congress has paused arms sales	Turkish purchase of Russian S-400 missile defense system; Turkish military intervention in Northern Syria	

**Source:** Foundation for Defense of Democracies<sup>77</sup>

Coordination among other Western arms exporters shows how alignment can limit arms import choices. Following the Turkish operation in northern Syria against Kurdish groups, many NATO members aligned with one another on the suspension of arms transfers to Turkey. Because Turkey previously shaped its defense doctrine and infrastructure around NATO systems, coordination by Western allies in arms suspension diminished the menu of options available to Turkey for sourcing from alternative suppliers.

<sup>68</sup> Nyheter, S. V. T., Jonas Löfvenberg, and Victor Blomdahl. 2019. "Finland Stoppar All Vapenexport till Turkiet." SVT Nyheter, October 9, 2019, sec. Utrikes.

<sup>69</sup> Emmott, Robin. 2019. "EU Governments Limit Arms Sales to Turkey but Avoid Embargo." Reuters, October 14, 2019.

<sup>70</sup> "Turkey's Ruling AKP Blames Germany for Delay in Altay Tank Production." 2020. Ahval. December 16, 2020.

<sup>71</sup> "Germany Halts Plans to Upgrade Turkey's Tanks." 2018. Deutsche Welle. January 25, 2018.

<sup>72</sup> Ozberk, Tayfun. 2022. "Analysis: Why Do Turkey's Upcoming Reis-Class Submarines Have Potential to Affect Balances in the Region?" Naval News. January 23, 2022.

<sup>73</sup> Ministerie van Algemene. 2021. "Change of National Export Control Policy with Regard to Turkey Following the Turkish Army's Incursion into Northern Syria - Publication - Government.nl." Www.government.nl. October 15, 2021.

<sup>74</sup> Nyheter, Löfvenberg, and Blomdahl, 2019.

<sup>75</sup> "Spain Stops Arms Exports to Turkey over Syria Offensive." 2019. Al Arabiya English. October 15, 2019.

<sup>76</sup> Thorneus, Ebba. 2019. "Sverige Stoppar Krigsmaterielexport till Turkiet." Aftonbladet (Sweden). October 15, 2019.

<sup>77</sup> Erdemir and Brobst, 2022.

The impact of complete embargoes, partial bans, and restrictions on specific components is extensive. The U.S. pause on arms sales, Rotax’s termination of aircraft engine exports, German engine restrictions, and Canada’s ban on drone optics is destabilizing Turkish defense exports. Western restrictions are the result of Ankara's lack of concern for how buyers use Turkish weapons, which often undermines NATO and its values. But Ankara’s disruption of NATO’s status quo is set against its dependence on arms components available only from its allies.

B. Engine Dependence

Turkish arms exports are primarily aircraft, armored vehicles, and ships. Figure 4 shows the top categories of Turkish weapons systems exported. Notably, aircraft exports more than tripled in 2022 from 2021. These exports are likely to continue to rise over the next several years given the success of Turkish drones.

**Figure 4:** Turkish Weapons Exports in Millions of TIV Units by Category, 2012-2022

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Aircraft	–	–	–	24	–	–	–	30	20	50	172	296
Armored Vehicles	61	55	69	71	109	101	138	211	228	183	142	1,370
Artillery	52	27	17	9	9	–	–	–	0	5	5	125
Missiles	–	5	5	10	7	4	6	6	2	11	11	66
Other	–	–	–	–	1	2	2	2	1	–	–	7
Sensors	–	–	–	–	–	8	16	–	–	3	–	27
Ships	28	51	62	108	116	64	88	–	–	186	67	771
Total	141	138	154	223	242	179	249	248	251	438	398	2,661

**Source:** SIPRI Arms Transfer Database - Trend Indicator Values (TIVs) expressed in millions<sup>78</sup>

Regardless of how independent Turkey becomes in its arms manufacturing capabilities, it still relies on foreign imports for the functionality of certain key weapons systems, specifically engines for Turkish-built armored vehicles, ships, and aircraft. As such, the Turkish defense industry's primary

<sup>78</sup> Stockholm International Peace Research Institute. 2022. “SIPRI Arms Transfers Database | SIPRI.” Stockholm International Peace Research Institute. 2022.

challenge lies in its ability to obtain engines. As Turkey's relationship with the West has declined, the use of Turkish weapons systems against civilians in conflicts like those in northern Syria and Nagorno-Karabakh only hastens the withdrawal of Western states' engine imports to Turkey. Ankara is currently acquiring essential imports from suppliers outside its traditional circle of partners and continues to build a domestic defense industry capable of designing and manufacturing engines. As such, foreign imports from alternative suppliers serve as "stopgap" measures to allow domestic manufacturers time to enhance engine-building capabilities.<sup>79</sup> In the meantime, however, Ankara is still arms dependent to some degree.

**Jet Engine (TF-X):** Turkey's TF-X fifth-generation fighter jet development is stalled due to the state's lack of indigenous engines. Despite seeking foreign suppliers, including Rolls-Royce, with whom they signed a 2019 deal, Turkey has been unable to acquire the necessary technology due to disputes over sharing British intellectual property given the involvement of a Qatari-Turkish company.<sup>80</sup> Turkey has since commissioned TRMotor<sup>81</sup> to develop an auxiliary power unit and air turbine start system that may eventually be part of an indigenous engine. Initially, General Electric's F110 engine will be used for the TF-X program. Russia has also offered to provide engine technology, but concerns over additional sanctions from Washington discount this option. In October 2020, Turkey and Ukraine signed an agreement to cooperate on the development of jet engines, with Turkish officials remaining optimistic that they will be able to produce indigenous jet engines for their advanced fighters by 2029.

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<sup>79</sup> Erdemir and Brobst, 2022.

<sup>80</sup> Pitel, Laura, and Silvia Pfeifer. 2019. "Rolls-Royce Dials Back on Project to Build New Turkish Fighter Jet." *Financial Times*, March 4, 2019. Pitel, Laura, Peggy Hollinger, and David Bond. 2018. "Turkey and UK Battle to Save Fighter Jet Project." *Financial Times*, June 13, 2018.

<sup>81</sup> Owned by SSTEK A.S., which is owned by Turkey's defense procurement agency, the Presidency of Defense Industries (SSB), see: Burak E. Bekdil. 2021a. "Turkey Hopes New Engine Deal Will Power Future TF-X Fighter Jet." *Defense News*. February 16, 2021.

**Helicopter Engines:** Turkey depends on LHTEC, a joint venture of Rolls-Royce and U.S.-based Honeywell, to power its T129 ATAK helicopter.<sup>82</sup> With a stake in the manufacturing of the T129, the United States dictates which states Turkey can sell the helicopters to. The United States approved the recent sale of six T129s to the Philippines while it rejected sales to Pakistan.<sup>83</sup> With the U.S. threat of blocking Turkish helicopter exports, Ankara realizes it must generate greater independence in engine-manufacturing capabilities. While currently developing and testing domestic helicopter engines for Turkey's first indigenous multipurpose helicopter (the Gokbey), Ankara, for the time being, has turned to Ukraine to help produce engines for its heavy-class helicopter, the ATAK 2.<sup>84</sup>

**Battle Tank Engine (Altay):** Turkey is heavily reliant on the United States and Germany for the engines that power armored vehicles. When developing its Altay main battle tank, Ankara attempted to secure an engine from German tank manufacturer Rheinmetall as early as 2017, but the German company imposed an unofficial embargo on Turkey due to its democratic backsliding and violations of human rights.<sup>85</sup> In October 2019, Germany restricted arms exports to Turkey, citing Erdoğan's military incursions into northern Syria. Consequently, Turkey turned to South Korean manufacturers Doosan and S&T Dynamics to circumvent German restrictions. Doosan and S&T Dynamics, both of which use German components, will supply the engine and transmission for the initial models of Altay tank while Turkey works on domestically manufacturing the BATU engine for the next-generation models.<sup>86</sup> But until Turkey achieves the indigenous capability to manufacture engines, it will remain dependent on foreign inputs.

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<sup>82</sup> The T129 is developed in partnership with Anglo-Italian AgustaWestland and based on the Italian Agusta A129 Mangusta platform.

<sup>83</sup> Bekdil, Burak Ege. 2021c. "Turkey to Export T129 Helos to Philippines despite Block on Pakistani Order." Defense News. May 26, 2021.

<sup>84</sup> "Turkey to Use Ukrainian Engine in Its Heavy Class Attack Helicopters." 2021. Daily Sabah. March 15, 2021.

<sup>85</sup> Bekdil, Burak Ege. 2021b. "BMC in Talks to Sell Turkish Shares to Local Steelmaker." Defense News. May 11, 2021.; Reuters. 2017. "Rheinmetall Fails to Get Clearance for Turkey Export Contracts," March 23, 2017, sec. Aerospace and Defense.

<sup>86</sup> Bekdil, Burak Ege. 2021e. "Turkey, South Korea Sign Deal for Turkish Altay Tank." Defense News. October 25, 2021.; and Erdemir and Brobst, 2022.

More critically, Ankara is still reliant on foreign imports of strategic weapons and high-end arms like ballistic missile defense, fifth-generation tactical military aviation, air-independent propulsion submarines, and space-based assets.<sup>87</sup> Turkey's sensor and radar infrastructure is closely linked to NATO and the transatlantic network through data links. Despite their defense modernization plans, Turkey lacks the necessary high-tech command-control nodes, algorithmic warfare capacity, and battle networks to quickly modify this critical sensor architecture and will therefore continue to depend on NATO's capabilities in these areas for the foreseeable future. Nevertheless, Turkey has come a long way from relying on Western imports. Moving forward, Turkey will slowly wean off Western engine imports and increase its domestic engine-manufacturing capability. For now, the development of domestic engine manufacturing capabilities is burdened by the need to locate willing suppliers of the technology that the West refuses to sell Turkey because of its human rights violations and violent military incursions. But the existence of a domestic defense industry in the first place significantly increases Ankara's bargaining power with its allies and allows for increased control in the region.

### 3.3. Russia-Ukraine War

Russia's 2022 invasion provides an opportunity for Turkey to showcase its domestically manufactured weapons systems. With the continued success of its drones in this conflict, Turkey has shown that it can be self-sufficient in terms of arms and it has increased the pool of potential buyers for these proven-effective Turkish-made weapons. Additionally, Turkey's refusal to enact sanctions reveals that Ankara sees Moscow as an economic partner and clarifies that Turkey's regional stance has shifted to accommodate a re-emergence of Russia-Turkey relations.

#### 3.3.1. TB-2 Drones in Ukraine

When it comes to drone warfare, Turkey no longer relies on foreign imports, instead pioneering aerial autonomous weapons systems for its allies. Turkish Bayraktar TB-2 drones have helped alter the balance

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<sup>87</sup> Wilson, 2022.

of power in the Russia-Ukraine War. The head of Ukraine's air force described the TB-2 drones as "life-saving" and confirmed their successful targeting of Russian targets.<sup>88</sup> Selcuk Bayraktar, the owner of the firm Baykar Defense that produces the TB-2, is now a legend in Ukraine; the Kyiv Zoo named a baby lemur after him, and his weapons are referenced in a popular song claiming the drone "makes ghosts out of Russian bandits."<sup>89</sup> The flat, gray unmanned aerial vehicle (UAV) with angled wings and a rear propeller carries laser-guided bombs, is small enough to be carried in a flatbed truck, and costs \$5 million USD - a fraction of similar American and Israeli drones. It is a medium-altitude, long-endurance UAV equipped with four laser-guided bombs.

Given the TB-2's low-cost production and commercial components, the Russia-Ukraine war demonstrates that TB-2 operators can endure losses and replenish drones quickly, which enables them to augment Ukrainian capabilities and maintain pressure on Russian forces without risking the lives of pilots. Ukrainian TB-2 operators developed a range of tactics to counter the threat posed by fighter jets: flying at less than one thousand feet to get lost in the ground clutter (thus hiding from patrolling fighters) and luring Russian fighters into the weapon-engagement zone of ground-based missiles.<sup>90</sup> These tactics capitalize on the TB-2's unique capabilities and allow it to evade detection and attack even in highly contested areas. But as the war has progressed, the TB-2's ability to operate in lightly defended airspace has decreased since Moscow began deploying heavier concentrations of low- and high-altitude radars and missiles against the drones.

The only way to analyze the TB-2's overall effectiveness in the Russia-Ukraine War is through the data released by Ukraine itself. The lack of Ukrainian propaganda videos featuring the TB-2 suggests that its

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<sup>88</sup> Forrest, Brett, and Jared Malsin. 2022. "Ukraine Says It Used Turkish-Made Drones to Hit Russian Targets." Wall Street Journal. February 27, 2022.

<sup>89</sup> Witt, Stephen. 2022. "The Turkish Drone That Changed the Nature of Warfare." The New Yorker. May 5, 2022.

<sup>90</sup> In places with sparse Russian ground forces and ground-based surface-to-air missiles (SAMs), the TB-2 hides from longer-range acquisition radar by using terrain, then suddenly resurfaces to strike targets of convenience. When Russian defenses are strong, the TB-2 flies beyond the range of Russian missiles and then uses their powerful optics to scout for Ukrainian ground forces and provide artillery support, see: Massa, Mark. 2022. "The TB2: The Value of a Cheap and 'Good Enough' Drone." Atlantic Council. August 30, 2022.

role is becoming more limited, most likely now serving as a scout for Ukrainian ground forces or striking naval targets.<sup>91</sup> But while the TB-2 is not a game-changer, it demonstrates how a well-built, commercially derived platform can sustain attrition and continue deployment.

As such, the cost-effective Turkish drone is one of the most in-demand items on the international arms market. After its successful performance in the Nagorno-Karabakh conflict and the Syrian and Libyan civil wars, dozens of states have signed deals to purchase the TB-2, and more have expressed interest.<sup>92</sup> In addition, drone sales have helped Ankara improve ties with Turkic states like Kazakhstan, Kyrgyzstan, Turkmenistan, and Azerbaijan and develop new partnerships with other states like Poland, Saudi Arabia, and Tunisia. But the key to the continued success of the TB-2 and new generations of Turkish UAVs is Turkey's defense cooperation with Ukraine.

The TB-2's performance in the Russia-Ukraine war incentivizes states to purchase the state-of-the-art Turkish weapons system. But Turkish drones, including the TB-2, also depend on foreign imports for their successful sale and deployment. In 2020, Canada terminated the exportation of sensors for the TB-2, and Austria's Rotax<sup>93</sup> also stopped exporting TB-2 engines, stating that the engines were only certified for civilian use (Turkey was using these foreign, off-the-shelf, non-military engines to produce the TB-2 drones).<sup>94</sup> Turkey turned toward several other states interested in producing or procuring replacement engines for the TB-2, most notably Ukraine. Figure 5 displays the current drone models and their respective engines.

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<sup>91</sup> Massa, 2022.

<sup>92</sup> Albania, Azerbaijan, Ethiopia, Kyrgyzstan, Libya, Morocco, Niger, Pakistan, Poland, Qatar, Tunisia, Turkmenistan, and Ukraine have signed deals to purchase the TB-2, see: Erdemir and Brobst, 2022.

<sup>93</sup> Rotax is an Austrian subsidiary of Canadian Bombardier Recreational Product (BRP).

<sup>94</sup> Turkey continued to export the TB-2 throughout 2021 but it is unclear whether Ankara found a new engine or if it continued to use stockpiled Rotax engines, see: Sevunts, Levon. 2020. "Bombardier Suspends Delivery of Aircraft Engines Used on Military Drones | CBC News." Canadian Broadcasting Corporation, October 25, 2020. ; and Sarukhanyan, Vahe. 2020. "The Killing Business: Israeli 'Kamikaze' Drones Used by Azerbaijan Utilized French and Swiss Technologies." Hetq. December 3, 2020. <https://hetq.am/en/article/124955>.

**Figure 5: Turkish Drones and Engine Models**

Name of Drone	Engine Manufacturer/Model	Country of Origin (Engine)	Notes
Bayraktar TB-2	<ul style="list-style-type: none"> <li>Rotax (until October 2020)</li> <li>Claims of joint production with Ukrspetsexport using Ukrainian engines<sup>95</sup></li> </ul>	Austria/Canada	Due to its record of success in combat, the TB-2 is now one of the most sought-after weapons systems in the world. Its components are subject to export restrictions due to its use in conflicts.
Bayraktar Akinci	<ul style="list-style-type: none"> <li>TUSAS Engine Industries (TEI)<sup>96</sup></li> <li>TEI-PD170 turbo diesel aviation engine (as of 2018)<sup>97</sup></li> </ul>	Turkey	As of October 2020, TEI began producing a new domestic engine for both the Akinci and TB-2 though exact details are scarce.
Anka Aksungur	<ul style="list-style-type: none"> <li>TEI</li> <li>Two twin-turbo diesel PD-170<sup>98</sup></li> </ul>	Turkey	
Karayel	<ul style="list-style-type: none"> <li>Vestel Savunma</li> <li>Intra Defense Technologies and Advanced Electronics Company</li> <li>97 hp air-cooled 4-cylinder engine</li> </ul>	Turkey/Saudi Arabia	Engine production location is unclear, however, given that Turkey previously produced the Karayel without Saudi assistance, Turkey is likely the engine manufacturer
Bayraktar TB-3 (under development) <sup>99</sup>	<ul style="list-style-type: none"> <li>TEI<sup>100</sup></li> </ul>	Turkey	Follow-up to successful TB-2 model
Bayraktar MIUS (under development) <sup>101</sup>	<ul style="list-style-type: none"> <li>Ivchenko-Progress</li> </ul>	Ukraine	MIUS uses a dual engine system for its AI-25 TLT and AI-322F engine variants. MIUS will likely be used in conjunction with Turkey’s planned light aircraft carrier TCG Anadolu.

**Source:** Foundation for Defense of Democracies<sup>102</sup>

Figure 5 shows the Bayraktar TB-2 drone and developing Bayraktar MIUS use Ukrainian engines while the Bayraktar Akinci, Anka Aksungur, Karayel, and Bayraktar TB-3 (under development) all use domestic Turkish engines. While Turkey proudly produces the majority of its premiere weapons system domestically, it recognizes potential in cultivating a defense partnership with Ukraine.

<sup>95</sup> Bisht, Inder Singh. 2020. “Ukraine Forming Joint Venture with Turkey to Produce 48 Bayraktar TB2 Drones.” The Defense Post. November 25, 2020.

<sup>96</sup> “Local Engines to Power Turkey’s Cutting-Edge Combat Drones.” 2020. Daily Sabah. October 30, 2020.

<sup>97</sup> Sunnetci, Ibrahim. 2019. “TEI-PD170 Turbo Diesel Aviation Engine Serial Production Delivery Ceremony.” Defence Turkey. 2019.

<sup>98</sup> Wong, Kelvin. 2019. “Turkey Advances Anka-Aksungur MALE UAV Development.” Janes. Janes Information Group. April 18, 2019.

<sup>99</sup> “Local Engines to Power Turkey’s Cutting-Edge Combat Drones,” 2019.

<sup>100</sup> Ibid.

<sup>101</sup> Yaylali, Cem D. 2021. “Baykar Makina Unveils MIUS UCAV Concept.” Janes. Janes Information Group. July 26, 2021.

<sup>102</sup> Erdemir and Brobst, 2022.

Turkish-Ukrainian drone development began prior to the 2022 Russian invasion. Turkish defense firms signed engine deals with Ukrspetexport (2020),<sup>103</sup> Ivchenko-Progress, and Motor Sich (2021) to develop components for Turkish drones. And in 2021, Baykar Defense secured land in Ukraine to build a factory and testing, training, and maintenance center for TB-2 drone systems.<sup>104</sup> Ukraine's industrial prowess and desire for drone capabilities to fend off Russia made it the ideal partner for Turkey. Ukraine's heightened motivation to purchase drones and other defense equipment from Turkey amidst the ongoing war generates significant potential arms sales. With the war's end nowhere in sight, Ankara benefits both from supplying Ukraine with weapons systems to deter Russian forces during the current conflict and from creating Ukrainian arms dependence on Turkey (thus securing future arms sales).

Additionally, there are several motivations for other states to purchase the TB-2 drone, in part because of its performance on the battlefield, but also for diplomacy. The aforementioned Selcuk Bayraktar, owner of Baykar Defense, which produces the TB-2, is Erdoğan's son-in-law. As such, several governments see TB-2 orders as a way to appease Erdoğan. This is particularly true for Eastern European states under Russian threat. Given Erdoğan's history of vetoing NATO involvement in the Baltic States and Poland in 2020, for example, Eastern European states use TB-2 purchases as a means to buy Erdoğan's goodwill in hopes that he will not block a future NATO response to Russian threats.<sup>105</sup>

As a result of engine suppliers terminating their exports to Turkey due to Turkey's military use of civilian-intended dual-use engines, Turkey was compelled to produce its own engines for UAVs, ultimately achieving self-sufficiency in its crucial arms exports. While Bayraktar TB-2 drones are not new to the battlefield, they change the narrative of Turkish defense exports and bolster recognition for the domestic Turkish defense industry.

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<sup>103</sup> Ukrspetexport is a state-owned Ukrainian defense manufacturer. It announced the joint venture to produce TB-2s in Ukraine.

<sup>104</sup> The factory is rumored to be around Kharkiv and Donetsk, targets of Russian attacks, see: Burak Ege, Bekdil. 2022. "Turkey's Defense Industry Eyes Export Expansion as Government Navigates Geopolitical Stage." Defense News. August 8, 2022.

<sup>105</sup> "Turkey Still Blocking Defense Plans for Poland, Baltics, Say NATO Allies" 2020. Ekathimerini.com. June 17, 2020.

### 3.3.2. Russian Economic Cooperation

While the West has turned its back on Russia, Ankara continues to maintain economic ties with Moscow. In fact, trade has flourished in the last year. Turkey's exports to Russia increased 86 percent to \$1.15 billion in October 2022, and imports from Russia have more than doubled to \$5.03 billion.<sup>106</sup> Turkish companies manufacturing machinery, electronics, spare parts, and other items that Russia needs for its military shows how Moscow can fuel its war effort despite international sanctions.<sup>107</sup> Moreover, Turkey's access to Russian energy means that it is not facing the same level of price increases as Europe or the Americas.

Post World War II, Turkey's relationship with Russia was influenced by the Cold War rivalry between the West and the Soviet Union.<sup>108</sup> Turkey strategically decided to participate in Western institutions while still maintaining relations of mutual respect and cooperation with Russia. Today, the purchase of the Russian S-400 opens new doors for Moscow's presence in Ankara. Turkey increased its imports of Russian crude oil and plans to co-produce a natural-gas hub and the construction of a nuclear power plant with Moscow. Turkish imports of Russian crude oil more than doubled in the months after the Ukraine invasion and helped Turkey ease the pressure on its economy. Ankara also provides a safe haven for Russian money as a means to keep Turkey's economy afloat.

Ankara carefully balances ties with NATO and Russia as the Russia-Ukraine War continues, seeking to be the diplomatic broker between the East and the West. This increases the value of Turkey on both sides of the war as Turkey is Russia's only remaining connection to the West. Turkey has taken advantage of its

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<sup>106</sup> Wilks, 2022.

<sup>107</sup> Malsin, Jared. 2023. "Russia's Ukraine War Effort Fueled by Turkish Exports." Wall Street Journal. February 3, 2023.

<sup>108</sup> The re-emergence of Russia-Turkey relations dates back to a historic "love-hate" relationship. While they have historically fought numerous wars against each other, the Soviet Union was one of the first states to recognize Turkey's independence in 1921. The following two decades saw increased engagement with one another through the creation of the Treaty of Friendship and Non-Aggression, signed in 1925. However, in 1945, tensions rose when the Soviet Union attempted to negotiate a treaty that would challenge Turkish sovereignty over the Turkish Straits. This issue, along with the Soviet Union's territorial claims in Eastern Turkey, became the main point of Soviet-Turkish tensions and led Turkey to join the Council of Europe and NATO in 1949 and 1952, respectively.

unique position to provide military aid to Ukraine, hold peace talks, and negotiate the Black Sea grain deal, thus increasing its international stature and generating greater independence from NATO.

## 4. The Case of India

The U.S.-India relationship has improved dramatically in the past two decades. The United States describes its relations with India as “a defining partnership for the 21st century,” seeing India as a “natural ally” with “shared values.”<sup>109</sup> The efforts to advance India and help it “become a major world power in the 21st century”<sup>110</sup> began in 2005, when the United States aimed to increase India's influence in the global community and international organizations, strengthen India's military capabilities and technological advancements, and promote joint military operations between the two states. In U.S. Department of State briefings, Washington deems India as a “major defense partner” with “critical” and “vital” importance to U.S. strategy in the Indo-Pacific.<sup>111</sup> Despite its growing ties with the United States, India also considers Russia - a hostile revisionist adversary and long-term strategic competitor of the United States - a valuable ally and an unprecedented “strategic partnership.”<sup>112</sup>

As a democratic, rule-bound, and non-aligned state, India’s relations with autocratic, rule-breaking Russia are unexpected. The Russia-Ukraine War illuminates India’s commitment to Russia, damaging the emerging U.S.-India and Quad defense cooperation. Given differing interests and ideas about global order, what keeps India and Russia bound together, and why? The answer to this question is essential for U.S. policymakers as they seek to expand the strategic relationship with India. While several other factors like the residue of Cold War collaboration and recent geopolitical alignments contribute to India’s relationship with Russia, a primary driver is material arms support. This case study of India examines how deep New Delhi’s dependence on Moscow runs and assesses whether the West can break through to diversify India’s arms and facilitate greater alignment with the Quad.

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<sup>109</sup> Obama, Barack, and Narendra Modi. 2015. “Statements by President Obama and Prime Minister Modi of the Republic of India.” Whitehouse.gov. January 25.

<sup>110</sup> Vajpayee, Shri Atal Bihari. 2000. “Asia Society Annual Dinner.” Asia Society. Presented at the Asia Society Annual Dinner, September 7.; and Modi, Narendra. 2017. “For the U.S. And India, a Convergence of Interests and Values.” Wall Street Journal. June 25, 2017.

<sup>111</sup> U.S. Department of State. 2019. “A Free and Open Indo-Pacific: Advancing a Shared Vision.”; and Wells, Alice G. 2019. “U.S. Interests in South Asia and the FY 2020 Budget.” June 13.

<sup>112</sup> Mattis, James. 2022. “Summary of the 2018 National Defense Strategy.” Marine Corps Association. April 20, 2022.

## 4.1. Alliance Dynamics

### 4.1.1. India's Alliance Dynamics in the Quadrilateral Security Dialogue

India, Australia, Japan, and the United States formed an ad-hoc core group to respond to the Indian Ocean Boxing Day tsunami in 2004. Their efficient cooperation on mobilizing tsunami aid provided the basis for the original formation of the Quad, which aimed to address issues of regional concern. The four states met briefly in May 2007 to discuss common areas of interest, including disaster relief. Later that year, the Quad executed the only military exercise for the first Quad grouping. This exercise, the second Malabar of September 2007 (Malabar 07-02), brought together the four navies along with the Singaporean navy for exchanges of personnel and drills in sea control and multi-carrier operations in the Bay of Bengal.<sup>113</sup> But Malabar 07-02 was the final act for this initial Quad grouping. The PRC intensified its campaign against the Quad by filing official demarches with each of the four states.<sup>114</sup> Moreover, mounting Chinese pressure prevented Australia, India, and the United States from formalizing the dialogue, and officials from each of the states began to distance themselves from joint security concerns. Australia preferred to restrict the Quad to issues of trade and culture while Indian protests over Malabar 07-02 threatened the passage of the U.S.-India civil nuclear deal. With Japanese Prime Minister Abe's resignation in late 2007, the Quad lost its key architect and cheerleader. It was clear that in 2007, the four states were not aligned on the major threats facing the region or the means of addressing those challenges.

However, several further years of destabilization in the Indo-Pacific led to a growing alignment in foreign policies. The period between the first iteration of the Quad and the second afforded opportunities to increase relations between the states. Significant developments include India's increasing relations and joint military exercises with the West and the subsequent addition of Japan and Australia to these relations and exercises. India and Japan participated in trilateral relations with the United States and separately with Australia. India also introduced "2+2" (defense and foreign minister) meetings with Japan, the

<sup>113</sup> Giger, Olivia. 2007. "Indian Navy | Malabar 07-02." Bharat Rakshak. September 7, 2007.

<sup>114</sup> Buchan, Patrick Gerard, and Benjamin Rimland. 2020. "Defining the Diamond: The Past, Present, and Future of the Quadrilateral Security Dialogue." Center for Strategic and International Studies. March 16, 2020.

United States, and Australia. Further, India and the United States signed a communications compatibility and security agreement (COMCASA) in 2015 and a logistics exchange memorandum of agreement (LEMOA) in 2016.<sup>115</sup> Japan joined the formerly bilateral Malabar U.S.-India naval exercise in 2015.<sup>116</sup>

Chinese coercion after 2015 contributed significantly to the alignment of interests underpinning the Quad. As India found itself on the receiving end of Chinese military coercion, engaging in a standoff at the Doklam border junction with Bhutan and the PRC in 2017, New Delhi understood the necessity of a strong border defense.<sup>117</sup> Additionally, the PRC blocked India from becoming a member of the nuclear suppliers group.<sup>118</sup> These factors contributed to India's investment in the Quad. For India, the Quad can provide a long-term strategy to deter the PRC in the region. With the other states bolstering relations with one another and also experiencing increased Chinese coercion, the Quad reunited in 2017.

The second Quad grouping was formed with two underlying motivations: 1.) The United States, Australia, India, and Japan have a common interest in “upholding the rules and norms of the current order; augmenting existing institutions; ensuring freedom of navigation and trade; and promoting connectivity, economic development, and security within existing rules and standards”<sup>119</sup>; and 2.) All four Quad members believed that the PRC's rise and the reach of the Belt Road Initiative posed a threat to them and the region.<sup>120</sup> Both motivations for forming the Quad grouping are consistent with the theory that states form alliances/alignments to balance against strong/threatening states. Democracy as a common interest coupled with Chinese encroachment in the region provides motive for the Quad's formation.

It is key to remember that the Quad is a loose grouping with common security interests intended to bolster relations between Australia, Japan, India, and the United States. It has no binding treaty that calls for the

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<sup>115</sup> Panda, Ankit. 2018. “The Diplomat.” *The Diplomat*. September 9, 2018.

<sup>116</sup> Vivek Raghuvanshi, “Japan to Join Malabar as Permanent Participant,” *Defense News*, October 13, 2015,

<sup>117</sup> “Doklam Standoff Ends: A Timeline of Events over the Past 2 Months.” 2017. *Live Mint*. August 28, 2017.

<sup>118</sup> Aneja, Atul. 2017. “No Room yet for India in NSG, Says China.” *The Hindu*, May 22, 2017, sec. World.

<sup>119</sup> Miller, Manjari Chatterjee. 2021. “The Quad, AUKUS, and India's Dilemmas.” *Council on Foreign Relations*. October 13, 2021.

<sup>120</sup> *Ibid*.

defense of the other state in the case of a Chinese attack. Instead, it focuses on “democracy, a rules-based order, and a free, open and inclusive Indo-Pacific.”<sup>121</sup> These key factors of alignment provide the framework for the Quad to shape the global world order and deter the PRC’s aggression in the region. India, Australia, Japan, and the United States’s cooperation today transcends the initial purpose of disaster relief.

India's strategic partnerships with other members of the Quad have significantly deepened in recent years. The United States is becoming one of India's up-and-coming major defense partners, purchasing several heavy-lift U.S. aircraft and anti-submarine warfare platforms.<sup>122</sup> In 2020, the fourth and final "foundational" U.S.-India pact further strengthened security relations and facilitated defense trade. India’s partnership with the Quad members is expected to deepen, thus contributing to overall regional stability and security. Despite these developments, many Indians remain uncertain about how the Quad mechanism will fit into India's regional strategy. India's strategic autonomy in its foreign policy has resulted in a reluctance to form international alliances and created an apprehension toward formalized multilateral engagements. Further, India's neutrality in the Russia-Ukraine War makes it an outlier among Quad members, leading to questions about India's commitment to core Quad values.

But as Indian leaders continue to see the PRC as a primary security challenge, and relations have become more contentious after Indian and Chinese troops clashed along their disputed border again in 2020,<sup>123</sup> New Delhi faces a bottleneck situation. India has not condemned Russia’s 2022 invasion of Ukraine because of their dependence on Russian arms to equip the Indian Armed Forces. But the emergence of U.S. intelligence concerning the supply of Chinese weapons to Russia has India at a crossroads. Standing by its Cold War ally, India is at the mercy of Russia, which is developing a budding arms relationship

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<sup>121</sup> Kutty, Sumitha, and Rajesh Basrur. 2021. “The Quad: What It Is – and What It Is Not.” *The Diplomat*. March 24, 2021.

<sup>122</sup> Congressional Research Service, 2022. “The ‘Quad’: Security Cooperation among the United States, Japan, India, and Australia Overview.” Congressional Research Service.

<sup>123</sup> This border skirmish continues steadily through 2021 and 2022.

with India's key adversary, the PRC. Directly condemning Russia would jeopardize India's continuous arms supply and post-delivery maintenance while standing by Russia threatens India's regional security with respect to the PRC.<sup>124</sup>

#### 4.1.2. India's Initial Gravitation Towards the Soviet Union

A combination of security, economic, and political motives has influenced India's choices and motivations even after the dissolution of the Soviet Union; these factors continue to play a significant role in shaping India's relations with major powers. Despite India's stated non-alignment, in the latter half of the Cold War, New Delhi had evidently shifted its alignment toward the Soviet Union as seen in substantial purchases of Soviet defense equipment, the signing of the 1971 treaty, and ongoing scientific cooperation.

Defence Minister Krishna Menon drew New Delhi closer to the Soviet Union because of her socialist ties. But more significant in the initial pull was the U.S. partnership with Pakistan - through the Southeast Asia Treaty Organization (SEATO) and the Baghdad Pact in the 1950s - which prompted India to lean toward the Soviet Union to balance the threat of Pakistan. Moreover, arms sales introduced another dimension to the Indo-Soviet relationship. In the 1950s, as Russia and the PRC's relations began to wear thin, New Delhi began looking at Soviet military technology to balance the PRC and, more importantly, Pakistan.

But the 1971 Indo-Pakistani War in the second half of the Cold War explicitly tilted India to the Soviet Union. Some reports suggest that the Indian leadership believed that the Russian naval intervention was instrumental in deterring the United States from taking military action against India in support of Pakistan.<sup>125</sup> When the United States dispatched warships to the Indian Ocean to prevent India from attacking Pakistan, around 16 Soviet vessels were reportedly present in the area.<sup>126</sup> These Soviet ships

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<sup>124</sup> India abstained on UNGA Resolutions on the Russia/Ukraine War, but it has not recognized Russian annexations (i.e. Crimea). The March 2023 G20 Foreign Ministers meeting in New Delhi produced a resolution accepted by all members except Russia and the PRC, that Russia should withdraw its troops.

<sup>125</sup> Joshi, Yogesh. 2019. "Samudra: India's Convolution Path to Undersea Nuclear Weapons." *The Nonproliferation Review* 26: 481-97.

<sup>126</sup> *Ibid.*

followed the U.S. ships while others took up positions to launch anti-ship missiles from nuclear submarines, ultimately forcing the United States to withdraw.<sup>127</sup> After the United States terminated its remaining arms sales to India and Pakistan following the 1971 war, India perceived the Soviet Union as a more reliable supplier of arms. Under Prime Minister Indira Gandhi, who aligned ideologically with the Soviets more than the Americans, India signed the Indo-Soviet Treaty of Friendship and Cooperation in 1971.<sup>128</sup> The treaty symbolized “the close partnership between India and the Soviet Union,” and on security matters it indicated “an alignment of interests in the face of regional and international challenges.”<sup>129</sup>

After the 1971 treaty, India and the Soviet Union/Russia entered a phase of mutual backing. The Soviet Union, refraining to condemn India’s 1974<sup>130</sup> and 1998 nuclear tests, backed India’s military involvement in Goa, Bangladesh, and Sri Lanka, and supported New Delhi’s position on Kashmir at the United Nations General Assembly.<sup>131</sup> In return, India has backed or remained silent on Soviet invasions in Eastern Europe and Afghanistan, Russian actions in Syria, Russia’s annexation of Crimea and the 2022 invasion of Ukraine, Russian interference in Western democratic elections, and Russia’s position on chemical weapons use.<sup>132</sup>

#### 4.1.3. The Chinese Threat

Russia and India share concern over growing Chinese influence in Central Asia. Although neither state has tried to directly confront the PRC, India takes a cautious approach by gradually building its own capabilities while rhetorically supporting the U.S. regional strategy challenging Chinese initiatives. On

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<sup>127</sup> Ibid.

<sup>128</sup> Madan, Tanvi. 2020. *Fateful Triangle : How China Shaped U.S.-India Relations during the Cold War*. Washington, D.C.: Brookings Institution Press.

<sup>129</sup> India Ambassador to Russia - Venkatesh Varma, 2021.

<sup>130</sup> The Soviets overtook the shipment of heavy water for India’s nuclear reactors after the United States and Canada suspended their shipments.

<sup>131</sup> Parthasarathy, G. 2019. “India, Too, Has an All-Weather Friend.” *The Hindu Business Line*. September 19, 2019.

<sup>132</sup> Bagchi, Indrani. 2016. “Putin, Pakistan, China: Why India Has Gone to Great Lengths to Protect the Special Quality of Its Russia Relationship.” *The Times of India*, October 14, 2016.; and Mohan, Geeta. 2018. “India Backs Russia against UK Resolution about Chemical Weapons.” *India Today*. June 28, 2018.

the other hand, Russia seems to have aligned itself with the PRC, building stronger military and economic ties. Nevertheless, many believe that in private, Russia remains deeply concerned about the PRC's expansion into Central Asia, and its bypassing of Russia to reach Europe.<sup>133</sup> However, Russia continues to cultivate relationships with both India and the PRC, even as Russia helps India acquire defense technology to compete with the PRC.<sup>134</sup>

For India, Russia posed as a crisis manager in the 2017 and 2020 Sino-India border skirmishes, shining light on India's arms dependence on Russia. Early in the 2020 crisis, India's Defense Minister Rajnath Singh pleaded with Russian officials to secure emergency supplies of spare parts and equipment and expedite arms transfers.<sup>135</sup> On the other hand, the defense relationship between the PRC and Russia has grown stronger, with joint exercises, sharing and co-development of high technology, cyber security, and space ventures.<sup>136</sup> This closeness between Russia and the PRC has the potential to create two vulnerabilities for India, which relies heavily on Russian arms: 1.) In the event of another border conflict with the PRC (or even Pakistan), Beijing's bargaining leverage with Moscow could lead Russia to slow or terminate the supply of spare parts and ammunition; 2.) During peacetime, Chinese acquisition of and knowledge about advanced Russian defense systems could enable it to identify and exploit weaknesses in India's defenses.<sup>137</sup> New Delhi cannot easily alleviate these risks; any sudden shift in procurement has the potential to cause Russia to deny India critical spare parts or continued maintenance before India can sufficiently diversify its arms suppliers.

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<sup>133</sup> Yogesh Joshi and Anit Mukherjee, "From Denial to Punishment: The Security Dilemma and Changes in India's Military Strategy towards China," *Asian Security* 15, no. 1 (2019): 25–43

<sup>134</sup> Joshi, Manoj. 2019. "India's Strategy in the China-Russia-USA Triangle." Observer Research Foundation. December 20, 2019.

<sup>135</sup> Lalwani, Sameer. 2020. "Revelations and Opportunities: What the United States Can Learn from the Sino-Indian Crisis." *War on the Rocks*. July 10, 2020.

<sup>136</sup> Kendall-Fiona, Andrea, David Shullman, and Dan McCormick. 2020. "Navigating Sino-Russian Defense Cooperation." *War on the Rocks*. August 5, 2020.

<sup>137</sup> Lalwani, Sameer, Frank O'Donnell, Tyler Sagerstrom, and Akriti Vasudeva. 2021. "The Influence of Arms: Explaining the Durability of India–Russia Alignment." *Air University*, January 15, 2021.

While Chinese encroachment poses a significant threat to Russia and India, it is not their primary regional concern. Russia still perceives the U.S.-NATO presence in the West as its main threat whereas current Indian doctrine sees Pakistan<sup>138</sup> as its most immediate threat. These preoccupations dominate Russian and Indian conventional force planning and their short- to medium-term focus. Despite suspicion of the PRC and its intentions, Russia and India appear to free-ride or pass the burden of dealing with the PRC to the West, particularly the United States. It is also worth noting that India and Russia share lengthy borders with the PRC, which makes them vulnerable geographically and may partially account for their desire to keep tensions low.

India's slight ideological preference for the Soviet Union, U.S. support for Pakistan, and Soviet political and military support for India during crises initially contributed to the reasoning behind the Indo-Soviet relationship. India and Russia, however, both partner with each other's rivals and adversaries. These partnerships create a divergence in relations between India and Russia, which both states compartmentalize to maintain their arms partnership.

## 4.2. India's Arms Dependence on the Soviet Union/Russia

Indo-Soviet defense cooperation began in the 1960s, evolving from a patron-client dynamic to the co-development of weapons systems. Russia secured immediate Indian security needs and facilitated technological transfers for independent domestic defense production and industrial development. Today, the vast majority of India's weapons systems are Russian, with New Delhi purchasing more than \$70 billion USD worth of arms from Moscow since 1991.<sup>139</sup> In comparison, the U.S. relationship with India continues to mature, with arms sales growing to \$16-18 billion USD over 15 years; in fact, India signed

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<sup>138</sup> China was a major contributor to Pakistan's nuclear weapons program which was designed to balance India's.

<sup>139</sup> Lalwani et al., 2021.

\$15 billion USD worth of arms in just the span of a year (2018-2019), showing just how quickly this relationship is evolving.<sup>140</sup>

#### 4.2.1. Initial Soviet Arms Procurement

As elaborated in the previous section, the Soviet Union and India aligned in several different ways that initially brought the two states together in their defense cooperation. In terms of initial weapons procurement in the 1960s, India faced a crossroads between Western and Soviet weapons. India's first Russian arms import was the MiG-21 fighter aircraft. Previously, India's fighter squadrons were British and French aircraft. But the failure of the United States to provide naval equipment and India's inability to receive approval to lease three British destroyers led New Delhi to question whether the West was a reliable arms supplier. When searching for its fighter aircraft, India opted to procure the MiG-21 over U.S. or UK alternatives due to the aircraft's superior speed, lower cost, and ease of operation and maintenance. Additionally, the U.S.-Pakistan relationship, as well as the efficiency of the Soviet Union's centralized decision-making, pushed India to select Soviet weapons. The Soviets provided MiG-21 manufacturing assistance in India, integrating the state into the defense supply chain for airframes, engines, and components.<sup>141</sup> India hoped the MiG-21 would facilitate the transfer of technology and the capacity to produce the advanced weapons system domestically, which would ensure greater military self-sufficiency and autonomy from major powers.

While Western governments often required the use of the supplier's currency and upfront pre-delivery payment, India received "friendship prices" in Soviet arms: advanced weapons systems were offered at a low price, India could stagger payment over time, and purchases could be made in rupees. The difficulties of procuring Western weapons led India to acquire submarines, frigates, bombers, attack and transport

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<sup>140</sup> Shukla, Ajai. 2019. "Russian Arms Sales Boom in Face of Prickly Ties, Possible Sanctions." *Business Standard*. March 11, 2019.

<sup>141</sup> Ian C. C. Graham. "The Indo-Soviet MIG Deal and Its International Repercussions." *Asian Survey* 4, no. 5 (1964): 823–32.

helicopters, air defense systems, and tanks from the Soviets.<sup>142</sup> Russia continued to provide India with advanced nuclear and space technology despite the dissolution of the Soviet Union. The accumulated stock of defense material from the Cold War created lock-in effects. The risk that India's existing arms stockpile could be compromised if Russia denied spare parts, ammunition, or servicing support generated high fixed costs and made it difficult for India to reverse or switch suppliers. Additionally, the absence of Russian organizations and operators with accumulated knowledge of India's systems threatened to render its existing arms stockpile obsolete. These lock-in effects ensured a continuation of Indo-Russian defense sales cooperation after the end of the Cold War.

#### 4.2.2. Indo-Russian Production Assistance, Co-Development of Advanced Weapons Systems, and Russian Support for India's Nuclear Deterrent

India and Russia had extensive defense collaboration as a result of aligning political views, friendship, and continuous arms transfers. India received more production assistance than any other state importing Soviet arms.<sup>143</sup> Russia provided production assistance, offered co-development of advanced weapons systems, and contributed to India's nuclear deterrent. With the hopes of increased technology transfer, the potential to generate a domestic defense capability, and a move towards research and development self-reliance, India continued to indulge in Russia's assistance. But Russia's significant aid in developing India's defense technology and industry ensured India's enduring dependence. Increasing India's capacity for new arms guaranteed Russia a lasting arms client that could keep up to date with evolving and maturing Russian arsenals. Never fully facilitating India's desire for an effective and independent domestic defense industry, Russia provided technological development and assistance without ensuring long-term functionality. As such, India's efforts to develop its military are hindered by an inability to fully

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<sup>142</sup> Lalwani et al., 2021.

<sup>143</sup> The Soviet Union assisted India with the construction of facilities designed to assemble MiG-21 and MiG-23/27 fighters and repair T-72 tanks, see: Lalwani et al., 2021.

absorb new technology and industrial knowledge, therefore leading New Delhi to continuously seek out Russia.<sup>144</sup>

The premiere example of Indo-Russian defense collaboration is the 1998 joint development of the BrahMos supersonic cruise missile system. Russia produced the engine and seeker, and India developed the guidance control system, airframe, and onboard electronics.<sup>145</sup> Through this partnership, India gained access to technology related to the canisterization of missiles, which was used to develop its Agni-I missile. But the degree to which India had a meaningful contribution to the BrahMos system is limited; the propulsion technology of the BrahMos missile, which is arguably the most sophisticated part of the missile, is based almost entirely on Russia's Yakhont SS-N-26 anti-ship cruise missile.<sup>146</sup>

Russia has contributed to the advancement of India's nuclear deterrent. Decades of Russian assistance in manufacturing helped India produce its first SSBN, the INS Arihant, which was officially inducted into the Strategic Forces Command in November 2018, with a second boat, the INS Arighat, currently undergoing more localized sea trials.<sup>147</sup> Russia transitioned India from the U.S. GPS to the Russian Global Navigational Satellite System (GLONASS) to give New Delhi preferential access to precision signals for enhanced missile targeting.<sup>148</sup>

But leasing the Akula-class nuclear-powered attack submarine (SSN) to India from 1988-1991 and 2012-present shows a unique willingness from the Soviet Union/Russia to share technology while enforcing restrictions to limit the extent of operational knowledge.<sup>149</sup> During the first lease of the

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<sup>144</sup> Singh, Lt. Gen NB. 2017. "Building a Defence Industrial Base." Center for Land and Warfare Studies. April 6, 2017.

<sup>145</sup> Sawhney, Pravin. 2016. "Missile with Make in India Label." The Pioneer. June 30, 2016.

<sup>146</sup> Cohen, Stephen P, and Sunil Dasgupta. 2013. *Arming without Aiming*. Brookings Institution Press, pp. 25.

<sup>147</sup> Yogesh Joshi, "Angles and Dangles: Arihant and the Dilemma of India's Undersea Nuclear Weapons," War on the Rocks, 14 January 2019,

<sup>148</sup> Dikshit, Sandeep. 2011. "India Strikes Deal with Russia on Glonass." The Hindu, December 18, 2011, sec. India.

<sup>149</sup> Stockholm International Peace Research Institute, 2022.

Akula-class SSN, Soviet personnel operated the reactor and denied access to any Indian personnel.<sup>150</sup> Additionally, Russia aided India in manufacturing the Su-30MKI, which advanced India's ability to domestically produce all the components of the fighter aircraft, including the engine.<sup>151</sup> But limited technology transfer and access led several Indian Ministry of Defence officials to call the Su-30MKI program a "mistake."<sup>152</sup> It is unlikely that Russia would give more access as doing so would potentially undercut Russia's own defense exports and allow India to become operationally independent.

#### 4.2.3. India's Arms Dependence on Russia in Numbers

Since 1962, India's reliance on Russian imports has steadily increased, resulting in a significant number of Soviet-built platforms still in use today. By the end of the Cold War, 70 percent of India's military equipment was Soviet.<sup>153</sup> In the post-Cold War period, India has continued to obtain large acquisitions from Russia, furthering the arms dependence already established through accumulated stock, Indian familiarity with Russian weapons platforms, and efficient Indo-Russian acquisition flows. For decades, the Soviet Union/Russia has provided the majority of India's arms imports. This paper focuses on imports to India from 1999-2021 because there were few significant acquisitions made from 1987-1998, which is often referred to as the "lost decade" in India's defense-procurement history. This section's data limit is 2021, the last fully indexed calendar year. Figures 6 and 7 demonstrate India's arms dependence on Russia. Figure 6 shows the types of weapons imported from Russia between 1999 and 2021.

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<sup>150</sup> Central Intelligence Agency. 1988. "India's Navy in Transition: Prospects and Problems for a Regional Force." Central Intelligence Agency, Freedom of Information Act Electronic Reading Room. June 19, 1988.

<sup>151</sup> "Russia, India to Ink Sukhoi Deal on Dec 28." 2000. Rediff. December 26, 2000.

<sup>152</sup> Singh, Ravinder Pal. 1998. Arms Procurement Decision Making. Solna, Sweden: Stockholm International Peace Research Institute. pp. 66.

<sup>153</sup> Jaffrelot, Christophe, and Aadil Sud. 2022. "Indian Military Dependence on Russia." Institut Montaigne. July 5, 2022.

**Figure 6: Russian Weapons Imported to India 1999-2021**

Types of Weapons	Weapons/Equipment
Missile systems including missiles and missile launcher and artillery systems	<p><b>1999-2005:</b> R-27ERI-40 R-27ETI-36 R-73E-100 RVV-AE 30, Uran 3M 24 E, Uran 3M 24E combat missile, Uran 3M 24E NH practice missile, Klub missile, combat, Klub missile, practice, Containers for Klub missile, Launchers for RVV AE missile, Club Anti-Ship Missile Launcher</p> <p><b>2006-2011:</b> Air to Air missiles, SAM (3M 24E), Missile system of large caliber 9A52-2t Launching system Smerch MLRS, Transponder Loader Vehicle, 9A52-2T MLRS “Smerch”, 9T234-2T Transport Loading vehicles, SAM (9M38M1), SSM (3M54E), Land attack missiles (3M14E), Missiles R-73E, Anti-ship missiles</p> <p><b>2012-2016:</b> Anti-aircraft guided missiles for Strella 10M (Army), RVV — AE missile, Konkurs Missiles, Invar Missiles, Smerch Rocket Projectiles, 122 mm Rocket projectiles, GRAD (BM)</p> <p><b>2017-Present:</b> S-400 Triumf missile defense systems, 9M114 Kokon Anti-Tank Guided Missiles, Smerch rocket launcher systems, 3M-54E Klub cruise missiles, R-27R, R-73 and R-77 air to air missiles</p>
Aircraft and helicopters	<p><b>1999-2005:</b> SU-30 ac, Aircraft SU-30 MK1, MIG-21 UM, Kamov-31, MI-17 IV, IL-38</p> <p><b>2006-2011:</b> CSU 30MK1, Su-30MK1, MiG 29K Ship-based fighter aircraft (Navy), MI-17 V5 Medium lift helicopters (Air Force), KA-31 Ship-based helicopter (Navy)</p> <p><b>2012-2016:</b> MiG 29K Ship-based fighter aircraft (Navy), MI-17 V5 Medium Lift Helicopter (Air Force), KA31 Ship-based helicopter (Air Force)</p> <p><b>2017:</b> MiG-29K naval fighter aircraft, Su-30MKI fighter aircraft kits, Ka-31 naval helicopters</p>
Ships, submarines and naval systems	<p><b>1999-2005:</b> Kilo Class Submarine, Krivak class guided missile frigates</p> <p><b>2012-2016:</b> Follow on ships 1135.6 (Navy), INS Vikramaditya (nee Gorshkov) Aircraft Carrier</p> <p><b>2017- Present:</b> INS Chakra nuclear submarine (on lease)</p>
Battle Tanks	<p><b>1999-2005:</b> Battle tanks (T-90S/T-90SK)</p> <p><b>2006-2011:</b> T – 90C, T – 90CK, T-90, S &amp; SK tanks</p>

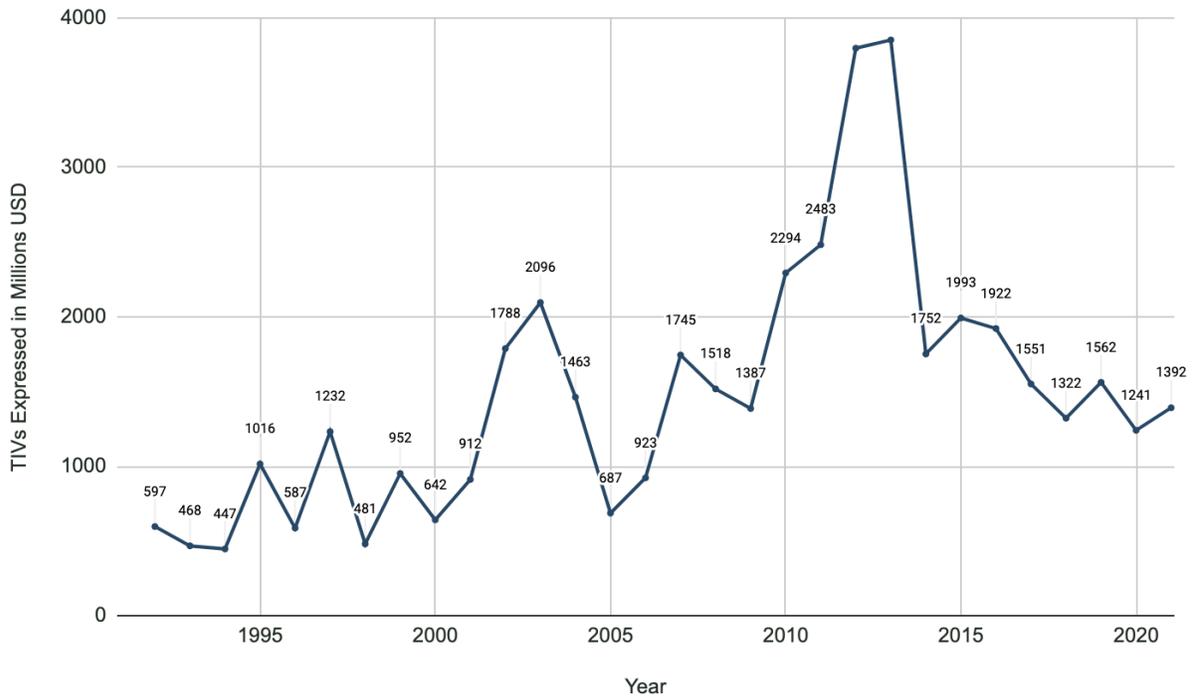
**Sources:** United Nations Register of Conventional Arms<sup>154</sup> and SIPRI Arms Transfer Database<sup>155</sup>

Figure 6 illustrates the diversity of weaponry that India has sourced from Russia over the past two decades and the extent of its dependence on Russian imports. Much of this equipment will continue to be in use in the Indian inventory for at least the next two decades and will require continuous maintenance and the supply of spare parts from Russia.

<sup>154</sup> “ROCA (United Nations Register of Conventional Arms).” 2023. United Nations Register of Conventional Arms. 2023.

<sup>155</sup> Stockholm International Peace Research Institute, 2022.

**Figure 7:** Russian Arms Transfers to India 1991-2021



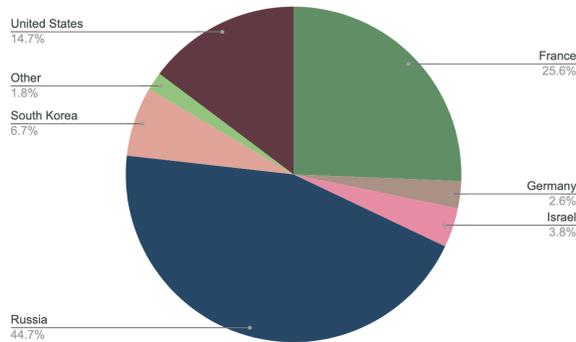
**Source:** SIPRI Arms Transfer Database - Trend Indicator Values (TIVs) expressed in millions<sup>156</sup>

Figure 7 shows the trend indicator values (TVIs) of Russian arms transfers to India from 1991-2021. The period between 1991 and 2001 saw Russia transferring only \$7.3 billion USD worth of arms to India, due to the collapse of the Soviet Union, which constrained supply and delivery and the transfer of big-ticket acquisitions like warships, fighter aircraft, etc. In contrast, 2011-2021 saw Russia transferring \$22.8 billion USD worth of arms to India.

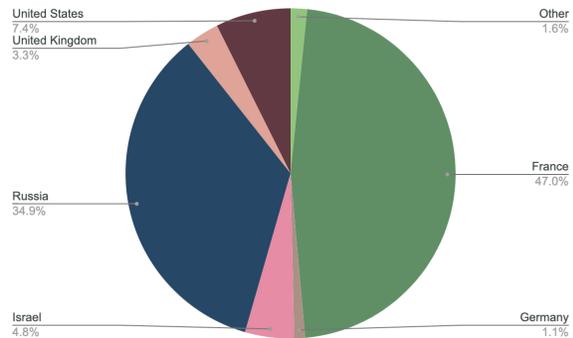
It is evident that Russia still serves as India’s main weapons procurer. But while India’s arms dependence on Russia is high, it has attempted to source a fraction of its arms from other suppliers like France, the United States, the United Kingdom, and Israel. While the change may be slow, Western states are gradually becoming bigger arms suppliers to India. Focusing on 2020 and 2021, Figures 8 and 9 demonstrate that the most recently documented arms transfers actually favor France

<sup>156</sup> Ibid.

**Figure 8:** Top 5 Arms Importers to India 2020



**Figure 9:** Top 5 Arms Importers to India 2021



**Source:** SIPRI Arms Transfer Database<sup>157</sup>

Upon closer inspection of the weapons systems imported to India, France has gained significant headway and will likely continue to play a key role in diversifying India’s existing military arsenal. France recently delivered 32 Rafale jets, 15 Mirage combat aircraft, and three Scorpene submarines, increasing their imports to India by 489 percent between 2013-2017 and 2018-2021. Given that many of France’s weapons are of Soviet origin and compatible with India’s existing stockpiles, France surpassed the United States to become the second largest supplier to India in 2018-2021.<sup>158</sup>

India’s diversification of suppliers (to now include Israel, the United States, and France, among others) increases New Delhi’s bargaining power with Moscow. Russia is more motivated to offer additional co-development opportunities for advanced weapons systems. While India still relies on Russian equipment, the poor performance of Russian military hardware in the Russia-Ukraine War and Moscow’s developing ties with Beijing might hasten New Delhi’s transition to alternative arms suppliers.

<sup>157</sup> Ibid.

<sup>158</sup> Stockholm International Peace Research Institute, 2023.

### 4.3. The Russia-Ukraine War and Russia's Defense Industry

Theory suggests that depending on foreign arms is potentially costly because the supply of weapons might be interrupted during regional crises and wars, which is when the threat to national security is highest. The sanctions against Russia in response to its incursions into Ukraine (2014 and 2022) combined with lost equipment at the front have exacerbated a decline in Russian arms export capability, thus burdening the Russian defense industry as a whole. Given the PRC's increasing involvement in the Russian defense industry, India will continue to exert greater efforts into diversifying its weapons purchases. The Russia-Ukraine War is the primary catalyst for India's urgent desire for arms diversification, which would decrease its arms dependence on Russia - a change that would disrupt the historic relationship between India and Russia.

Russia's second invasion of Ukraine triggered a deeper, underlying crisis to resurface - a failing Russian defense manufacturing sector. Since the annexation of Crimea in 2014, Moscow has faced a decline in its ability to export defense equipment. The compounding sanctions and destroyed or lost equipment at the front have transformed these chronic issues into acute threats. Russia's state-owned defense manufacturing firms were struggling financially prior to the 2022 invasion of Ukraine.<sup>159</sup> As of 2019, their debt had reached \$10 billion USD, while the total debt of Russia's military-industrial complex was estimated at \$31 billion USD. To address this, the government provided bailouts totaling around \$11 billion USD in 2016 and 2017 and consolidated all banking services for defense manufacturers under the state-owned Promsvyazbank.<sup>160</sup> In 2020, an official announcement revealed that the total debt had increased to \$39.5 billion USD, with estimated total defense spending at nearly \$44 billion USD.<sup>161</sup> The research and development capabilities and product demonstration processes of Russian defense

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<sup>159</sup> McGerty, Fenella. 2020. "Budget and Pandemic Present Challenges to Russia's Defense Industrial Base." Defense News. August 17, 2020.

<sup>160</sup> Bloomberg. 2019. "Putin's Huge Military Buildup Leaves Industry with Debt Hangover." The Moscow Times. July 16, 2019.

<sup>161</sup> Luzin, Pavel. 2021. "Russia's Defense Industry and Its Influence on Policy: Stuck in a Redistributive Feedback Loop | Russia Matters." Russia Matters. Harvard Kennedy School's Belfer Center for Science and International Affairs. November 3, 2021.

manufacturers have been negatively impacted by their high levels of debt. In 2018, India pulled out of the joint Su-57 project due to its high cost, outdated engine technology, and poor engineering.<sup>162</sup> Although India had already invested \$295 million USD in the project, it decided to divest and acquire fourth-generation French-made Rafale fighter jets.<sup>163</sup>

Moscow relies on imported machine tools to manufacture defense equipment because since the dissolution of the Soviet Union, its domestic machine tools industry has been unable to supply its domestic market. Moreover, Russia heavily relied on Taiwanese imports of semiconductor chips, which are a crucial component for precision-guided munitions. After the 2014 invasion, Russia was cut off from foreign components supplied by EU countries and Ukraine itself. Previously, the Ukrainian defense industry had provided helicopter engines, transport aircraft, rockets, missiles, gas turbine engines, and naval power components.<sup>164</sup> Due to Russia's inability to obtain engines from Ukraine, Moscow's shipbuilding efforts stalled. This resulted in canceled ships and delays for the Project 22350 Gorshkov-class frigates.<sup>165</sup> Russia sold incomplete Project 11356 frigates to India, which then entered into a deal with Ukraine's Zorya-Mashproekt for M7H2 gas turbines.<sup>166</sup> While Russia attempted to generate an import substitution campaign to return to completely domestically produced systems, it failed, further eroding the Russian defense industry. A continued failure to secure export orders could, in the medium to long term, degrade the entire defense industry.

The loss of Russian weapons systems on the battlefield raises questions about the quality of its military equipment. Moreover, if the war's debilitating effects push Russia closer to the PRC, the PRC could potentially acquire stakes in Russian defense manufacturing firms.<sup>167</sup> New Delhi's primary concern is that

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<sup>162</sup> Axe, David. 2021. "India Hates the Russian Su-57 Stealth Fighter." *The National Interest*. September 21, 2021.

<sup>163</sup> Pubby, Manu. 2018. "DRDO's Technology Boast Fells \$9 Billion Indo-Russian Aircraft Deal." *The Economic Times*, June 13, 2018.

<sup>164</sup> Banerjee, Vasabjit, and Benjamin Tkach. 2022. "After Ukraine, Where Will India Buy Its Weapons?" *War on the Rocks*. April 12, 2022.

<sup>165</sup> "Russian Frigate Admiral Kasatonov Begins State Trials." 2019. *Naval Today*. October 23, 2019.

<sup>166</sup> "Ukraine Agrees to Provide Engines for Indian Frigates Built in Russia." 2016. *Naval Today*. October 26, 2016.

<sup>167</sup> Sino-Russian defense manufacturing collaboration for critical parts and technology is already underway.

the PRC could then limit Russia's exports to India, thereby leaving India in a precarious situation. As such, India faces a dilemma: it will need to choose whether 1.) to continue importing arms from Russia and only consider temporary substitute suppliers that manufacture Soviet weapons, 2.) to diversify its arms suppliers, or 3.) to sufficiently advance its domestic defense industry. Regardless of what New Delhi decides to focus its efforts on, one factor remains clear: India must find alternatives (temporary or permanent) to Russian arms, which creates the opportunity to deepen ties with the United States and the Quad. As India has consistently sought to maintain strategic autonomy, it is probable that it will adopt a mixed approach in the short term, which involves depending on Russia for crucial systems while simultaneously striving to diversify and identify substitute suppliers. In the long run, India is likely to concentrate on enhancing its domestic manufacturing capabilities.

#### 4.4. The Extent of Russian Influence

To what extent does Moscow influence New Delhi's military doctrine, given India's long-standing arms dependence on Russia? While it is evident India heavily relies on Russian arms and Russian assistance in the co-development of advanced weapons systems, Russia's influence over Indian military strategy has been limited. The Soviet Union/Russia trained over 10,000 Indian soldiers in operating specific platforms and weapons systems imported to India.<sup>168</sup> This training was purely tactical to gain basic technical skills rather than strategic or operational skills. No Indians attended Soviet/Russian higher military colleges, where more advanced doctrinal concepts are taught.<sup>169</sup> Similar to how Russia provided production assistance but never granted full production independence, Moscow refrained from introducing Russian military doctrine and solely trained Indian service members on an operational basis. The lack of Russian influence in India's military doctrine can be seen in its current naval and ground warfare posture.

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<sup>168</sup> Azizian, Rouben. 2004. "Russia-India Relations: Stability amidst Strategic Uncertainty." Asia Pacific Center for Security Studies. October 2004.

<sup>169</sup> Lalwani et al., 2021.

Commonalities in Soviet/Russian and Indian naval nuclear deterrence posturing choices are due to the technological novelty of India's SSBN force, rather than any Russian strategic influence. Russia's SSBM is organized around a bastion posturing model.<sup>170</sup> And while India is also adopting a bastion posture for the INS Arihant, once it reaches a point where escort vessels are no longer needed, New Delhi will move toward a continuous-at-sea-deterrent model.<sup>171</sup> Moreover, while Soviet and Russian navies have historically organized with submarine-heavy sea denial strategies, the Indian Navy has traditionally aimed to establish blue-water sea control with a versatile expeditionary fleet capable of gaining control over contested domains.<sup>172</sup>

In terms of ground warfare, India's procurement of the Soviet T-72 tank in 1979 and the subsequent tactics the T-72 used is an example of how Soviet arms transfers do not influence Indian military strategy. The Indian Army acquired the full T-72 fleet over several years from 1982 to 1986.<sup>173</sup> New Delhi chose not to emulate the Soviet order of battle, which assigned T-72s to the secondary follow-on role for rapid maneuver through adversary gaps.<sup>174</sup> Instead, India assigned the breakthrough and follow-on missions to the T-72 and upgraded them to meet the state's predetermined operational requirements more closely.<sup>175</sup> This choice highlights India's independence from Soviet ground warfare doctrine, as it was not directly or indirectly influenced by the Soviets through training or arms sales. More importantly, the lack of Soviet influence shows that India is committed to developing its own military strategies tailored to its specific needs. This independence from Soviet ground warfare doctrine has wider implications for India's defense strategy. It suggests that India is less susceptible to external pressure from states like the PRC and

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<sup>170</sup> A bastion posturing model means that the submarines stay relatively close to port or berthed during peacetime and are only deployed for longer distances during crises, see: Posen, Barry R. 1987. "U.S. Maritime Strategy: A Dangerous Game." *Bulletin of the Atomic Scientists* 43: 24–29.

<sup>171</sup> Lalwani et al., 2021.

<sup>172</sup> Joshi, Yogesh. 2018. "Sailing through the Cold War: Indian Navy's Quest for a Submarine Arm, 1947-67." *India Review* 17: 476–504.; and Sachdeva, Captain Sanjay. 2014. "Sea Control by the Indian Navy: A Pragmatic Assessment." *Naval War College Journal*. 2014.

<sup>173</sup> Gady, Franz-Stefan. 2018. "India to Procure 1,000 Engines for T-72 Main Battle Tank Force." *The Diplomat*. October 3, 2018. ; and "T-72M1 Ajeya." 2015. *Global Security*. March 26, 2015.

<sup>174</sup> *Ibid.*

<sup>175</sup> *Ibid.*

Pakistan, which may attempt to exploit vulnerabilities in India's defense systems. By developing its own unique military strategies, India is better equipped to secure its borders and protect its citizens. While Russia has succeeded in generating significant Indian dependence on Russian defense equipment, India's independent military strategy demonstrates its potential for supplier diversification as it is not tied to Russian military doctrine. The lack of strategic influence Russia has on India, however, may foreshadow potential limitations on U.S.-India defense cooperation, which might hinder interoperability and the diffusion of military strategy.

## 5. Conclusion

While the cases of Turkey and India vary significantly, both demonstrate that alliance dynamics, arms transfers, and conflict are key factors that shift states away from their historic alliances/alignments.

Turkey's divergence from NATO in its regional conquests, its development of a domestic defense industry, and the performance of its domestic weapons systems in conflict all move Ankara away from its alliance with NATO. India's increasing Western defense cooperation through the Quad, the recent diversification in arms suppliers, and the Russia-Ukraine War's stifling of Russian arms exports are the key factors moving New Delhi away from its arms alignment with Moscow.

States like Turkey and India initially formed historic alliances/alignments when they felt their sovereignty threatened. Russia's 2022 invasion of Ukraine brought to light the longstanding issues that Turkey has had with its membership in NATO, as well as India's frustration with its reliance on Russia for arms. With Russia closed off to the West since February 2022, Turkey now sees a deeper relationship with Russia as a way to gain more respect from NATO allies and increase its bargaining power in the region. India sees an opportunity to broaden its exposure to Western defense cooperation. Despite continuing arms deals between India and Russia, India's increasing arms diversification from Russia could cripple the Russian defense industry in the long-term. We also now see the PRC becoming an agitator in the Russia-Ukraine War. The rise of other major powers like the PRC will further complicate foreign/defense policy, as the PRC may threaten states' sovereignty, which is a key catalyst for alliance building. The PRC's growing influence and relationship with Russia will also further enforce the long-standing East-West polarization.

Since its hegemony has been highlighted by the Russia-Ukraine War, the United States should seize this opportunity to both regain diplomatic accord with Turkey and acquire Indian defense contracts. Following are recommendations for U.S. policymakers as they seek to enhance relations with these two states:

*A. U.S. Policy toward Turkey: Recommendations in Brief*

The upcoming June 2023 national elections in Turkey will determine the next Turkish President through a popular vote (although there are concerns about corruption potentially jeopardizing the legitimacy of the election results). In his re-election campaign, Erdoğan is likely to tout the rapid development and performance of a robust domestic defense industry, which has given the AKP significant economic and political influence.<sup>176</sup> Moving forward, Washington's policy towards Ankara should discourage Turkey's continued collaboration with Russia and other NATO adversaries in the defense sector. In addition, the U.S. must lay the groundwork to establish a strong U.S.-Turkish defense partnership in a future post-Erdoğan era. The United States and other NATO members should calibrate export restrictions to offer certain buyers of Turkish arms the opportunity to purchase comparable NATO systems.

Alternatively, the United States can offer incentives and disincentives to discourage Turkey from deepening its defense cooperation with Russia and other NATO adversaries. Incentives include the opportunity to procure NATO military systems, as previously mentioned, while disincentives include sanctions under CAATSA (including a ban on U.S. export licenses). Regardless, the United States must prepare to rebuild strong defense industry partnerships with Turkey in the event of an opposition victory in the June 2023 elections.

*B. U.S. Policy toward India: Recommendations in Brief*

For India to alleviate its arms dependence on Russia, it must continue to diversify. If the recipient divides its arms imports evenly across several different suppliers, each supplier's power would be somewhat limited. India has purchased \$15 billion USD in U.S. defense equipment in the past ten years and plans to spend upward of \$150 billion USD in the next ten to fifteen years.<sup>177</sup> But while India is actively considering American options, these future sales are far from assured.

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<sup>176</sup> GlobalData PLC, 2023.

<sup>177</sup> Bommakanti, Kartik. 2017. "India-Russia Military-Technical Cooperation: Beyond Commercial Relations." Observer Research Foundation. June 22, 2017.

A key reason Russia has historically been a dominant supplier to India is that Russia cultivated India's desire to access, codevelop, or lease Russian technology required to build its own systems. Moscow created this dependence by being more willing to share with India required sensitive technology; Moscow also had more relaxed standards for transfers to India than the West offered. With the hope of one day achieving its own self-reliant domestic defense industry (and because it received "friendship terms" from Russia), India opted for Russian arms despite their lower quality. With 30-35 percent lower costs, the substandard Russian systems were a better option than Western systems. Despite their higher quality, U.S. weapons systems presented many obstacles in their acquisition. That, coupled with the U.S. military support for Pakistan, led India to discount the U.S. as a reliable arms supplier. However, Quad security cooperation changes this narrative.

Washington prioritizes sales to NATO members and does not want to antagonize allies that also hope to sell arms to India. But if the United States hopes to improve its relations with India and subsequently advance the Quad, it must offer conditions that appeal to New Delhi's appetite for more relaxed arms transfer agreements. At the same time, India must loosen its standards and requirements for arms transfers. Moving forward, the United States should consider easing some arms export controls and allow the transfer of technologies that were previously exclusive to the United States but are now available from other global competitors.

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