



An Economic Perspective into Türkiye's Defense Sector and Arms Production: Domestic and Global Implications

Deena Saleh

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A report¹ published in 2023 by the Stockholm International Peace Research Institute (SIPRI) states that Türkiye's arms exports increased by 69 percent between 2018-2022 compared to 2013-2017. According to SIPRI, Türkiye's arms trade witnessed dramatic changes in the last few years, with the country producing its own missiles, drones, and helicopters. The Turkish Aerospace and Defense Industry performance report² for 2022 states that the country's weapons industry had a total turnover of almost \$9.1 billion and exports of \$3.2 billion (these totals do not include civil aerospace). These figures increased from \$8.5 billion and \$2.3 billion in 2021, respectively. Total military and aerospace exports have increased fivefold from \$853 million in 2010 to \$4.4 billion in 2022.

Türkiye has devoted a large proportion of its national budget to defense³. Since the 2000s, it has managed to keep a steady growth route for its military-industrial capacity⁴. The export capacity of Türkiye's defense industry increased from \$196 million in 2004 to \$853 million in 2010 and to \$3,068 million in 2019. The Turkish government's investments in defense and weaponry have been motivated by the aspiration to expand the technological capabilities of its domestic defense sector, seek greater autonomy in terms of indigenously produced military acquisitions, as well as try to position itself as one of the top exporters of defense products globally⁵. Other arguments⁶ suggest that Türkiye's aim to position itself as a 'regional power,' necessitated the development of domestic⁷ defense technology to address the demands of the Turkish Armed Forces (TAF). Additionally, a sociocultural

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- 1 SIPRI. (2023). Surge in Arms Imports by Europe while US Dominance of Global Arms Trade Increases. <https://www.sipri.org/media/press-release/2023/surge-arms-imports-europe-while-us-dominance-global-arms-trade-increases>
 - 2 Savunma ve Havaçılık Sanayii İmalatçılar Derneği. (2022). SASAD sektör performans raporu 2022. <https://www.sasad.org.tr/sasad-sektor-performans-raporu-2022>
 - 3 Khalid, U., Habimana, O. (2021). "Military Spending and Economic Growth in Türkiye: A Wavelet Approach," *Defence and Peace Economics*, Taylor & Francis Journals, vol. 32(3), pages 362-376.
 - 4 Kasapoglu, C. (2022). Transforming From Arms Importer To Trendsetter: Assessing The Growth of Türkiye's Defense Industries. Atlantic Council. <https://www.atlanticcouncil.org/content-series/ac-turkiye-defense-journal/transforming-from-arms-importer-to-trendsetter-assessing-the-growth-of-turkiyes-defense-industries/>
 - 5 Global Data. (2021). Turkish defense spending remains a top priority for government in 2021 despite COVID-19 impact. Global Data Media Center. Retrieved at: <https://www.globaldata.com/media/aerospace-defense-security/turkish-defense-spending-remains-top-priority-government-2021-despite-covid-19-impact>
 - 6 İsmet A., Barış, A.Ö. (2021). A Political-Economic Map of The Turkish Defense Industry. Published by: Heinrich Böll Stiftung Association.
 - 7 Turkish Defence & Aerospace. (2020) "How Türkiye became one of the world's leading manufacturers of weapons systems?" <https://www.defensenews.com/native/turkish-defence-aerospace/2020/07/21/how-turkiye-became-one-of-the-worlds-leading-manufacturers-of-weapons-systems/>



explanation for the growing defense and military expenditures in Türkiye argues that it is influenced by the excessive political influence that the military holds over society. The military dominates politics and plays different roles in business, culture, and ideology, in addition to offering security and defense against foreign threats. At the same time, it enjoys legal and practical independence from civil scrutiny⁸.

While Türkiye made significant strides as a weaponry producer and exporter, the country has faced domestic economic problems, such as inflation, unemployment, and volatile Turkish Lira; and social problems, such as brain drain, and a refugee crisis. Such problems escalated after the earthquake struck the country in February 2023, which caused social and economic damage and exacerbated humanitarian needs. The World Bank reported⁹ an estimated \$34.2 billion in direct physical damages; an equivalent of 4% of the country's 2021 GDP. Such events bring the question: Should the Turkish government shift its focus from the defense sector and arms industry to more pressing economic and social challenges, or maintain and strengthen its global role as an emerging supplier of arms?

The validity and relevance of the second proposal are tied to the notion that a strong defense sector plays a positive role in the economic development of Türkiye, through facilitating technology spillovers, creating jobs, and generating export revenues. On the other hand, an overreliance on arms industry can lead to other problems, such as increasing the private sector debt¹⁰, which in turn lead to economic crisis and financial instability. This paper offers to conduct a cost-benefit analysis of Türkiye's strategy to develop its defense technological and industrial base as a promise of various advantages that are not always delivered.

The Emergence of Defense Industry in Türkiye

The history of developing a strong defense sector in Türkiye dates back to the late 1970s and early 1980s, after an arms embargo by the United States (US) and NATO allies following a Turkish intervention¹¹ in Cyprus in 1974. Türkiye built its first defense company Aselsan in 1975. However, the indigenous defense industry in Türkiye witnessed a booming revolution in the 2000s and 2010s, after the Justice and Development Party (AKP) came to power in 2002¹². The country faced security challenges, such as the Syrian Civil War, rising of the Islamic State of Iraq and Syria (ISIS), in addition to Kurdistan Workers' Party (PKK) in Kurdish-majority regions since the 1970s¹³.

8 Sekine, M. H. (2020). Increasing Türkiye's Military Expenditure At What Cost. <https://www.internationalaffairs.org.au/australianoutlook/increasing-turkeys-military-expenditure-at-what-cost/>

9 World Bank. (2023). Earthquake damage in Türkiye estimated to exceed \$34 billion: World Bank disaster assessment report. <https://www.worldbank.org/en/news/press-release/2023/02/27/earthquake-damage-in-turkiye-estimated-to-exceed-34-billion-world-bank-disaster-assessment-report>

10 The World Bank in Türkiye. World Bank. (2023). <https://www.worldbank.org/en/country/Turkiye/overview>

11 Kibaroglu, M. (2022). Transforming from arms importer to trendsetter: Assessing the growth of Turkey's defense industries. Atlantic Council. <https://www.atlanticcouncil.org/content-series/ac-turkey-defense-journal/transforming-from-arms-importer-to-trendsetter-assessing-the-growth-of-turkeys-defense-industries/>

12 Bakir, A. (2023). Türkiye's Defense Industry is on the Rise. The GCC is one of its Top Buyers. <https://www.atlanticcouncil.org/blogs/menasource/Turkiye-defense-baykar-gcc-gulf/>



The vision for a strong defense industry¹⁴ was initiated during the late 1970s and early 1980s, but it became more crystallized under President Recep Tayyip Erdoğan's rule. During his speech¹⁵ at the opening ceremony for the launching of the Kınalıada Corvette, the fourth ship of the MILGEM (national ship) Project, Erdoğan stated, “Today, we have five firms among the world’s top 100 defense companies. This number will inshallah (God willing) increase constantly. Our goal is to entirely end our foreign dependency in the defense industry by 2023.” It seems that Türkiye is gradually moving toward achieving such a goal. In 2004, only 20 percent of the military’s equipment and weaponry was supplied by the Turkish defense industry. The figure increased to 80 percent¹⁶ in 2023. In April 2023, Türkiye launched the largest warship, TCG Anadolu¹⁷, which is the world’s first ship to carry armed drones.

Between 2018 to 2022, with a jump of 69% of its arms exports compared to 2013-2017, Türkiye was the 12th largest exporter of conventional weapons in the world, including aircraft, armored vehicles, ships, and missiles. In the period between 2010 and 2021, the country concentrated on original and national design initiatives and created numerous new military products, including drones, tanks, and helicopters, which helped in reducing Türkiye's dependency on foreign resources¹⁸. Despite these developments, it cannot be said that the country achieved self-sufficiency in the arms industry. The defense technologies Türkiye uses include both domestically produced systems and imported foreign technologies that cannot be produced domestically and necessitate technology transfer as well as joint production with foreign collaborations. The country still depends on Western technologies, in particularly motorization¹⁹, despite its success to position itself as an emerging supplier in some niche groups of armaments, as reported by SIPRI²⁰.

Expenditures of Defense Industry

The idea that a large defense sector has positive effects on the economy through high military spending and technological innovation adopts the Keynesianism approach that high military expenditures promote economic benefits. In developed countries, the

- 13 Sekine, M. H. (2020). Increasing Türkiye’s Military Expenditure At What Cost. <https://www.internationalaffairs.org.au/australianoutlook/increasing-Türkiyes-military-expenditure-at-what-cost/>
- 14 Kibaroğlu, M. (2022). Transforming from arms importer to trendsetter: Assessing the growth of Turkey’s defense industries. Atlantic Council. <https://www.atlanticcouncil.org/content-series/ac-turkey-defense-journal/transforming-from-arms-importer-to-trendsetter-assessing-the-growth-of-turkeys-defense-industries>
- 15 Cumhurbaşkanlığı@tcgb.gov.tr. (2019). “our goal is to entirely end our foreign dependency in defense industry by 2023.” <https://www.tcgb.gov.tr/en/news/542/109882/-our-goal-is-to-entirely-end-our-foreign-dependency-in-defense-industry-by-2023->
- 16 Sanayi Gazetesi. (2022). Savunma Sanayi’nde Yerlilik Oranı Yüzde 80’lere Ulaştı. <https://sanayigazetesi.com.tr/savunma-sanayinde-yerlilik-orani-yuzde-80lere-ulasti/>
- 17 Middle East Eye. (2023). Turkey launches its largest warship and first drone carrier. <https://www.middleeasteye.net/news/turkey-tcg-anadolu-largest-warship-first-drone-carrier-launches>
- 18 Seren, M. (2021). Politics, Industry and Academia: Examining Dynamics of Turkish Defense Industry’s Great Leap Forward in the Post 2002 Era. *Bilig*, 96(96), pp. 93-119.
- 19 Bouvier, Emile. (2021). Türkiye: The Arms Industry on the Fast Track to Autonomy. *OrientXXI*. <https://orientxxi.info/magazine/Türkiye-the-arms-industry-on-the-fast-track-to-autonomy,5142>
- 20 Béraud-sudreau, L., Da Silva, D.L., Kuimova, A., & Wezeman, P.D. (2020). Emerging suppliers in the Global Arms Trade. SIPRI Insights on Peace and Security. https://www.sipri.org/sites/default/files/2020-12/sipriinsight2013_emerging_suppliers.pdf



spillovers from higher military expenditures and greater technological externalities can lead to a positive impact on economic growth²¹. However, while these positive effects can occur from time to time in Western countries, such as the United States, they might be non-existent or limited in semi-peripheral country such as Türkiye²². On the other hand, increased military expenditure can represent an opportunity cost in terms of social and public welfare, which reflects a trade-off²³ faced by developing countries, which can have other problems such as unemployment or inequality. For example, Canbay and Mercan²⁴ investigated how military spending in Türkiye affected the unemployment rate between 1988-2017. They found that in the short run, military spending did not have a significant effect on the unemployment rate, whereas in the long run it was found to reduce unemployment. In a similar vein, military expenditures were found²⁵ to have a significant negative effect on growth per capita GDP in Türkiye with business cycles of 16 years or more.

In 2020, the Turkish defense expenditures were reported at 2.4 % of GDP, whereas the armed forces personnel represented 1.6% of total labor force²⁶. The Turkish government's defense expenditure is set to steadily increase between 2019 and 2025, as the government prioritizes its defense industry. In the 2020 fiscal year, the defense expenditures peaked at a total of \$14.8 billion, which was a 6.5% increase compared to the previous year. This growth is expected to steadily continue as the Turkish budget is estimated to rise to \$17.5 billion by 2025 with a compound annual growth rate (CAGR) of 3.83%²⁷.

Meanwhile, the Turkish government faces important socio-economic challenges related to education, healthcare, and poverty, from which funds and resources are diverted in favor of the defense industry. This represents an important opportunity cost. More generally, overemphasizing arms production as the exclusive driver of economic growth could lead to undesirable outcomes, such as increased income disparities and social inequalities.

Another main pressing problem is the recent tendency to migrate abroad among Turkish workers²⁸ in the defense sector, despite the increasing ratio of individuals employed in the sector. In 2018, more than 270 Turkish defense contractors, most of whom are senior engineers, fled to Europe. Some companies affected by this migration include military software company Havelsan, missile-manufacturer Roketsan, and Aselsan²⁹. Besides this brain drain, the Turkish government has to address issues such as the need for new

21 Yakovlev, P. (2007) Arms Trade, Military Spending, and Economic Growth. *Defence and Peace Economics*, 18:4, 317-338, Doi: 10.1080/10242690601099679

22 Akca, I. (2010). "Military-Economic Structure In Türkiye: Present Situation, Problems, and Solutions". TESEV Democratization Program Policy Report Series, pp 1-38.

23 Sekine, M. H. (2020).

24 Canbay, S., Mercan, D. (2020). "Unemployment Effects of Military Spending in Türkiye". *Journal of Yasar University*, 15/60. 941-952

25 Khalid, U., Habimana, O. (2021). "Military Spending and Economic Growth in Türkiye: A Wavelet Approach," *Defence and Peace Economics*, Taylor & Francis Journals, vol. 32(3), pages 362-376.

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

27 Global Data. (2021). Ibid.

28 Gurini, F. (2020). "Türkiye's Unpromising Defense Industry". *Carnegie Endowment for International Peace*. Sada: Middle East Analysis. <https://carnegieendowment.org/sada/82936>

29 Ahval News. (2019). Exodus from Türkiye hits Defence Contractors. <https://ahvalnews.com/Türkiye-defence-industry/exodus-Türkiye-hits-defence-contractors>



markets and significant investment, political issues, dependence on imports, and the depreciation of the local currency. The final two difficulties are linked since many essential components used in the business are imported and priced in foreign currencies, which raises the cost of production for local vendors³⁰.

Finally, another important concern to take into consideration is the humanitarian perspective of arms production and trade. As an exporter of weaponry, Türkiye sometimes finds itself under international scrutiny for selling arms to countries involved in conflicts where they end up using these weapons against civilians. In recent years, Türkiye's arms exports have gone to regions with active armed conflicts, such as the Middle East, Asia, and Africa³¹. In 2022, Turkish drones such as Bayraktar TB-2 were demanded by countries, such as Azerbaijan, using it in the war with Armenia; Ethiopia in its struggle against the rebellious Tigray province; and in the Russia-Ukraine conflict. Such humanitarian and ethical concerns represent a critical debate concerning human rights when Turkish arms are used in war crimes. The casualties reported³² in northern Iraq, or on the Syrian-Turkish border in Western Idlib, provide such examples.

The Future for Turkish Defense Industry

Kurc highlights three³³ factors that might hinder Türkiye's self-sufficient defense industry, which are: the technological dependence on Western allies, the weak domestic institutions and civil-military rivalry, and low investment in research and development (R&D). First, despite Türkiye's proven record of arms production, Türkiye is importing high-technology and cost-effective subsystems for its domestic production, such as electro-optical sensors and engines³⁴. One main problem facing Türkiye is the lack of cost-effective technical capacity³⁵ to produce its military design. For example, the exports license of the partially U.S.-manufactured CTS-800A turboshaft engine was revoked by the US due to diplomatic tensions. Another example is the United Kingdom technology for the bomb racks that Türkiye is using for developing its armed drone Bayraktar TB2.

Second, Türkiye has to increase the investment in R&D to reach its goal of a self-sufficient defense industry and close the technological gap. Investment in R&D will boost innovations³⁶ in other sectors if the defense sector can act as a diffusion center for up-to-date technology, which will help the country attain competitiveness in products in the arms global market.

30 Baker, A. (2019). Challenges threaten the rise of Turkey's defense industry. Middle East Institute. <https://www.mei.edu/publications/challenges-threaten-rise-turkeys-defense-industry>

31 Béraud-sudreau, L., Da Silva, D.L., Kuimova, A., & Wezeman, P.D. (2020). Emerging suppliers in the Global Arms Trade. SIPRI Insights on Peace and Security. https://www.sipri.org/sites/default/files/2020-12/sipriinsight2013_emerging_suppliers.pdf

32 Airwars. (2023). Turkish Military in Iraq & Syria. <https://airwars.org/civilian-casualties/?country=syria&belligerent=turkish-military>

33 Kurç, C. (2017) Between Defence Autarky and Dependency: The Dynamics of Turkish Defence Industrialization. *Defence Studies*, 17:3, 260-281.

34 Ibid

35 Gurini, F. (2020). "Türkiye's Unpromising Defense Industry". Carnegie Endowment for International Peace. Sada: Middle East Analysis. <https://carnegieendowment.org/sada/82936>

36 Business Diplomacy. (2020). "Defence Economy of Türkiye and The Global Position of The Turkish Defence Industry." <https://businessdiplomacy.net/defence-economy-of-turkiye-and-the-global-position-of-the-turkish-defence-industry/>



Finally, structural deficiencies, such as weak planning capacity and institutional deficiencies, can prevent effective procurement policies and development of a sustainable defense industry in Türkiye. Additionally, Türkiye has witnessed fluctuations in the nature of civil-military relations, and whether the military should remain outside of politics and subordinate to civilian power or be directly involved in politics and policymaking. It is less likely for Türkiye to maintain a successful defense industry if such structural problems persist. As a result, clear guidelines should be drawn about the degree to which the military can intervene in politics, the structure of defense industry and ownership of companies belonging to the Turkish Armed Forces Foundation. Put differently, Türkiye is still vulnerable to potential disruptions in the world arms market and needs to develop its own technology to reduce reliance on imports if the country aspires to full autonomy.

In the last two decades, Türkiye's defense sector has expanded and modernized significantly, with a substantial rise in the percentage of needs of the TAF being met by domestic defense companies. Despite this development, in 2021, Türkiye's share in the global arms market was below 1 percent³⁷. In a related argument, SIPRI³⁸ states that 'a policy of ambitious arms export growth is difficult to implement in the long term; particularly as recent history has shown that arms exports by smaller exporters can fluctuate significantly', giving examples of Sweden and Brazil.

Despite all the economic and social costs associated with the prioritization of arms production and the questionable probability of attaining self-sufficiency in this domain, there are at least two factors that might lead Türkiye to keep pursuing this strategy. First, the potential economic and technological benefits, however marginal and uncertain. Although the government allocates resources to promote manufacturing and R&D in defense and weaponry, it anticipates that other industries could benefit from technical advancement as a result of the technological spillovers³⁹. Other sectors' development is closely linked to the defense sector such as transportation and aerospace⁴⁰; creating high value-added exports, increasing the pool of highly qualified workforce, which might promote long-term economic growth. For example, ASELSAN, which was established in 1975 to meet the needs of Turkish Armed Forces, has more than 7000 employees. In 2022, about 7% of the company's annual revenue went to self-financed R&D activities. The company is also working in numerous sectors such as security, transportation, medical systems, and information technology⁴¹.

Second, the increase in export capacity Türkiye has realized so far has allowed the country to compete in the field of relatively low technology products in the international market. Land platforms/systems are reportedly the top technological export category for the

37 Ibid

38 SIPRI. (2019). Trends in world military expenditure, 2018. Stockholm International Peace Research Institute. https://www.sipri.org/sites/default/files/2019-03/fs_1903_at_2018.pdf

39 Yilmaz, S., Yorulmaz, M. (2023). The effects of Turkish defense industry's transformation on Turkish foreign policy. *Journal of the human and social science researches*, 12 (1), pp.1-21. <https://doi.org/10.15869/itobiad.1186736>

40 Business Diplomacy, (n.d.). "Defence Economy of Türkiye and The Global Position of The Turkish Defence Industry." <https://businessdiplomacy.net/defence-economy-of-turkiye-and-the-global-position-of-the-turkish-defence-industry/>

41 ASELSAN. (2022). Organization that transforms knowledge into power and trust. About us. <https://www.aselsan.com/en/about-us>



Turkish defense industry, followed by sales of military aircraft, guns, and ammunition⁴². Similarly, Türkiye was able to position itself as a prominent player in the international market for armed drones, most notably with the Bayraktar⁴³ TB-2, built with the support of UK bomb rack technology⁴⁴. It means that Türkiye has to improve its export performance in the global arms market through deciding on its successful niche. Additionally, Türkiye's flexible policy for arms exports besides effective and affordable arms and drones offer an opportunity for Türkiye to reserve its place as an emerging supplier in the global arms market, given that most of the functions of Western drones are provided by Türkiye's drones at cheaper⁴⁵ price.

Conclusion

Even though Türkiye has not achieved full autonomy in the defense sector, Türkiye's success in reducing dependency on foreign suppliers from 80% to 20% might increase the country's national security and lead to cost savings. Additionally, Türkiye's involvement in the production and export of arms has benefited the country economically in terms of jobs creation and revenues from arms trade. However, the Turkish government is required to address other concerns, such as deteriorating Turkish currency, social tensions from refugees, and worsening welfare levels⁴⁶. Additionally, while the Turkish armaments industry has continued to expand in the last decade, this exponential pattern is expected to end soon owing to problems such as brain drain, persistent technological shortcomings, and limited market outlets. While arms exports have increased significantly, most production is for Türkiye's own armed forces. Furthermore, the domestic market will be saturated shortly, which will limit further growth of the weaponry sector⁴⁷. Other points worth mentioning are the uncertain global political arena, and the tensions in neighboring countries, in addition to the recent frequent discussions of the deteriorating economy in Türkiye. All of these factors may slow down the development of the arms industry in Türkiye. Thus, Türkiye still has a long way to go to increase its competitive power in the international arms market.

42 Akça, I., Özden, B.A. (2021). A political-economic map of the Turkish defense industry. Heinrich Böll Stiftung Association Turkey, pp.1-84

43 Bayraktar TB-2 drone is produced by Baykar Makina; a defense company based in Istanbul.

44 Campaign Against Arms Trade. (2023). CAAT - Türkiye's arms industry. Campaign Against Arms Trade. <https://caat.org.uk/data/countries/Türkiye/Türkiyes-arms-industry/>

45 Borsari, F. (2022). "Türkiye's Drone Diplomacy: Lessons for Europe". European Council on Foreign Relations. <https://ecfr.eu/article/Türkiyes-drone-diplomacy-lessons-for-europe/>

46 Bekdil, B, E. (2019). Turkish 'brain drain': Why are defense industry officials ditching their jobs in Türkiye for work abroad? Defense News. <https://www.defensenews.com/industry/2019/01/08/turkish-brain-drain-why-are-defense-industry-officials-ditching-their-jobs-in-Türkiye-for-work-abroad/>

47 Bouvier, E. (2021). Türkiye: The Arms Industry on the Fast Track to Autonomy. OrientXXI. <https://orientxxi.info/magazine/Türkiye-the-arms-industry-on-the-fast-track-to-autonomy,5142>



PRISME

Pathways to Renewed and Inclusive
Security in the Middle East



Deena Saleh

Dr. Deena Saleh holds a PhD in Economics from Istanbul University, Turkey, MSc in Economics from Hacettepe University, Turkey, and BSc in General Management Technology from the German University in Cairo (GUC). Her PhD dissertation examines long-term sources of social capital in the MENA region from a sociocultural context. Saleh is currently a lecturer of economics and has worked for a number of research centers in Turkey, with a focus on Middle East and North Africa. Her research interests include social capital, political economy, culture, and Middle Eastern studies.



PRISME

Pathways to Renewed and Inclusive
Security in the Middle East

PRISME Initiative

PRISME aims to redefine the conception of “security” in the Middle East and North Africa, as the starting point for strategic relations between MENA countries and their European and North American partners. It does so in pursuit of effective, collaborative approaches to ensuring a more peaceful and stable future. To this end, PRISME sponsors dialogue and debate between foreign policy professionals across diverse backgrounds and perspectives. These include individuals in governments, thinktanks and academic institutions located in the MENA region, Europe and North America, with a specific focus on engaging young and emerging thinkers and practitioners. Its goal is to re-define security in the Middle East, broadening the definitions of what it looks like, for whom, how it can be achieved, and how outside actors can contribute to it.

SALAM Project

SALAM (Sustaining Alternative Links beyond Arms and the Military) proposes to rethink the centrality of the arms trade in international relations with and among Middle East & North Africa (MENA) countries.

It fosters and amplifies ideas from a network of scholars and practitioners working in and with the Middle East. Issues they will address include the arms trade’s advertised role in cementing bilateral and multilateral ties between North America, Europe and the MENA region; the opportunity costs of over- or sole reliance on weaponry as security; and alternative modes of engagement that might redefine a shared strategic agenda.