

# The Potential Drawbacks Associated with Domestic Military Manufacturing in the GCC Countries

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Well in advance of the current round of geopolitical tumult, several Gulf Cooperation Council (GCC) countries declared their intention to develop their domestic military manufacturing capabilities<sup>1,2</sup>, ostensibly as part of efforts at realizing higher levels of self-sufficiency in the security domain.

Various recent events have reinforced this desire, including the disruptions to shipping around the Straits of Hormuz and Bab Al-Mandab; the supply chain difficulties emerging around Covid-19; and diplomatic finger-wagging by Western politicians, complemented by threats to suspend arms sales. Proponents of domestic military manufacturing have also cited the potential economic benefits when arguing their case.

Given the sensitivity of issues that pertain to national security, the public discourse in the GCC countries has tended to echo government enthusiasm for local arms production. Consequently, it is difficult to find discussion of the possible weaknesses of such an enterprise, especially when focusing on the opinions expressed by homegrown analysts.

This essay contributes to filling this gap by highlighting some of the potential drawbacks associated with domestic military manufacturing in the GCC. It begins with a short overview of the prevailing state of the sector, in addition to the future plans. It then explores some of the potential drawbacks.

At the outset, it is important to note that this essay cannot constructively speculate about the likelihood that individual GCC countries might succeed in their military manufacturing endeavors, or whether their investments are worthwhile. This is because much of the information required to make such assessments is confidential by design. Nevertheless, there is value in drawing attention to the potential pros and cons, as this enables those with better access to the relevant information to make a more informed appraisal.

## An Overview of Domestic Military Manufacturing in the GCC

Though the latent intention to develop domestic military manufacturing arguably exists in all six GCC countries, as of 2023, only two member states – Saudi Arabia and the UAE – have made any substantive progress in this regard. For the most part, Saudi Arabia's military manufacturing occurs under the umbrella of the state-owned Saudi Arabian Military Industries (SAMI), while the UAE's military manufacturing is performed by the EDGE Group. Both are closed military conglomerates.

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1 Vats, A., Serrano, M., 2016. Military self-reliance in the GCC: From purchasing power to industry powerhouse. Oliver Wyman.

2 Sheikh, H., Mark, B., Fayek, B., 2017. The emerging GCC defence market: The \$30 billion opportunity. Strategy&.



Unsurprisingly, given the sensitivity of military and security affairs, these companies do not provide transparent data on revenues, output, employment, and so on. Nevertheless, analysts gather data from public procurements and combine this with sparse public announcements by the companies themselves to produce estimates of the volume of their commercial activity.

Since its establishment in 2017, SAMI has grown rapidly: its revenues increased from \$20 million in 2020 to \$690 million in 2021, and it was awarded more than half of the \$2.9 billion disbursed to local companies in the 2022 Riyadh World Defense Show<sup>3</sup>. Its employment increased from 100 in 2018 to over 3,600 employees in 2023. Its product ranges include aerospace (drones, aircraft parts), defense systems (rocket launcher systems, gun systems), advanced electronics, and various other land and sea products.

EDGE (formerly EDIC, founded in 2014) was established in 2019 (like SAMI, it functions as a holding company with numerous subsidiaries), and has similar product categories: missiles and weapons, air platforms, land systems, naval systems, electronic warfare, and cyber defense. In 2020, it recorded revenues of \$5 billion, while employing 12,000 people, indicating a larger scale of commercial operations than has been achieved in Saudi Arabia thus far<sup>4</sup>. Neither EDGE nor SAMI officially disclose information about their clients, making it difficult to ascertain the extent to which they serve domestic versus regional or global needs. However, it is evident from defense exhibitions such as Abu Dhabi's International Defense Exhibition and Conference (IDEX) that catering to local demand is a priority for these entities<sup>5</sup>.

Notably, as will be expanded upon below, both companies are highly active in terms of joint ventures with international defense heavyweights. Moreover, Saudi Arabia and the UAE have ambitious expansion plans for their military manufacturing. For example, according to Saudi Vision 2030, SAMI seeks to be among the top 25 defense industries companies in the world by 2030, while also localizing 50% of total government defense spending.

Ideally, a clear breakdown of SAMI and EDGE's internal capabilities would be available, allowing readers to determine what they can produce alone, and what they need partners for. However, due to the sensitivity of such information, it is not readily available. For example, an April 2022 SAMI press release regarding the launch of a joint venture with Boeing states that it will cover the "maintenance, repair and overhaul and sustainment services for military rotary platforms currently operated in the Kingdom"<sup>6</sup>. No further details were provided.

In general, enthusiasm for the development of domestic military manufacturing among the GCC states stems from the perception that their supply of arms is less secure than it once

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3 Vidal, A., 2023. Saudi Arabian Military Industries (SAMI): Fueling the Growth of Saudi Defense Industry. Gulf International Forum, <https://gulfiif.org/saudi-arabian-military-industries-sami-fueling-the-growth-of-saudi-defense-industry>.

4 Rahman, F., Kamel, D., 2021. IDEX 2021: UAE's Edge eyes 15% revenue growth in 2021 and new export markets, CEO says. The National, <https://www.thenationalnews.com/business/aviation/idex-2021-uae-s-edge-eyes-15-revenue-growth-in-2021-and-new-export-markets-ceo-says-1.1172850>.

5 Soubrier, E., 2021. IDEX 2021: The UAE Confirms Its Shifting Tide in Defense Procurement. AGSIW, <https://agsiw.org/idex-2021-the-uae-confirms-its-shifting-tide-in-defense-procurement/>.

6 SAMI, 2022. SAMI announces joint venture with Boeing. <https://www.sami.com.sa/single-news-4.html>.



was<sup>7</sup>. This is partially due to exogenous disruptions to supply chains in general, such as shortages in semiconductors and shipping containers that have emerged in recent times. It also reflects the conditionality of Western arms sales that has accelerated following the Yemeni civil war, and that tacitly appears whenever GCC countries wish to take a course of action that contradicts Western countries' perceived interests – a phenomenon that seems to be occurring more frequently of late.

For example, in the case of Saudi Arabia, US president Joe Biden suspended sales of certain weapons in February 2021 as part of the US' withdrawal from offensive operations in Yemen due to divergent views regarding how to manage the crisis<sup>8</sup>. The UAE has faced a moving goalposts problem relating to its procurement of the F-35 fighter, with the Gulf country's growing relations with China and Russia causing consternation within the White House<sup>9</sup>.

The value of autonomy in military procurement has also increased due to what is perceived as the US' diminished willingness to act as the security guarantor of the GCC countries<sup>10</sup>. Saudi Arabia and the UAE in particular have suffered several high profile attacks on their civilian infrastructure, in addition to attacks on ships heading to or from their ports. While the US took steps to improve maritime security through increased patrols to make future attacks more difficult, it did not actively or explicitly seek to hold the perpetrators accountable. When combined with the general rise in regional instability following the Arab Spring, GCC governments feel vulnerable and wish to take steps that reinforce their sovereignty. For example, during the period 2011-2015, Saudi defense spending as a percentage of GDP almost doubled from 7.2% to 13.3%<sup>11</sup>.

Economic considerations also contribute to the large investments that have been made by Saudi Arabia and the UAE<sup>12</sup>. Both economies have historically exhibited a high level of dependence on hydrocarbons, and while they have made various efforts at diversifying their incomes during the last 50 years, the 2014 oil price crash has led to notable escalation in this regard. Two of the key goals are creating desirable jobs for nationals, and realizing sustainably high levels of innovation in the non-hydrocarbon sector, thereby generating a new and robust source of economic growth<sup>13</sup>.

The GCC governments generally believe that domestic military production can contribute to these goals directly: the jobs it creates are attractive as they tend to be high-skilled in nature, and the sector is research and development intensive, meaning high levels of

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7 Tullet, R., Asghar, S., Russell, S., 2022. GCC – Creation of a localized defense industry: A new path to the future. Deloitte.

8 Spetalnick, M., El Yaakoubi, A., Stone, M., 2022. Exclusive: U.S. weighs resumption of offensive arms sales to Saudis, sources say. Reuters, <https://www.reuters.com/world/us/exclusive-us-weighs-possible-resumption-offensive-arms-sales-saudis-sources-2022-07-11/>.

9 Rumley, G., 2022. Unpacking the UAE F-35 Negotiations. The Washington Institute for Near East Policy, <https://www.washingtoninstitute.org/policy-analysis/unpacking-uae-f-35-negotiations>.

10 Feierstein, G.M., Saab, B.Y. and Young, K.E., 2022. US-Gulf relations at the crossroads: time for a recalibration. Middle East Institute, (April 2022), retrieved May, 28.

11 Macrotrends, 2023. Saudi Arabia Military Spending/Defense Budget 1960-2023. <https://www.macrotrends.net/countries/SAU/saudi-arabia/military-spending-defense-budget>.

12 Tullet, R., Asghar, S., Russell, S., 2022. GCC – Creation of a localized defense industry: A new path to the future. Deloitte.

13 Mishrif, A., 2018. Introduction to economic diversification in the GCC region. Economic Diversification in the Gulf Region, Volume I: The Private Sector as an Engine of Growth, pp.1-26.



innovation<sup>14</sup>. Saudi Arabia and the UAE are trying to mimic the economic success that both Israel and Turkey have had in military manufacturing, with Israel's accomplishments in spite of its small size being particularly worthy of emulation<sup>15</sup>.

## The Potential Drawbacks

The potential drawbacks associated with these domestic military manufacturing efforts can be nominally divided into security and economic ones. However, they are actually interdependent, and it is the economic weaknesses that are more fundamental.

The basic problem that Saudi Arabia and the UAE have to grapple with is that both have historically struggled in the domain of homegrown innovation<sup>16</sup>. There have some areas of success, most notably hydrocarbons<sup>17</sup> and renewable energy<sup>18</sup>, but these are quite narrow fields. In contrast, the countries that Saudi Arabia and the UAE are trying to emulate, especially Israel, are ones with remarkably high levels of innovation across a broad range of sectors<sup>19</sup>.

Accordingly, the question that policymakers in the region need to ask themselves is: given the chronically low levels of homegrown innovation, how is a sustained investment in military manufacturing likely to succeed in generating the desired levels of innovation? Notably, innovation in manufacturing is not a luxury – it is a necessity given the risk of obsolescence, especially in light of the growing role of cyber elements in modern warfare. Moreover, the requisite innovation does not fall under the umbrella of “tinkering” to gain a cost advantage; instead, it takes the form of the wholesale creative thinking that manufacturers must deliver to ensure that their products continue to be effective in the battlefield.

In response to this challenge, Saudi Arabia and the UAE have deployed a strategy of using joint ventures with localization requirements. In principle, following the example set by South Korea during the development of its military sector<sup>20</sup>, these cooperative agreements can allow for a transition to greater levels of self-reliance.

However, there is a big difference between, on the one hand, absorbing static knowledge and, on the other hand, developing the ability to be independently innovative, especially when focusing on the sort of transformative innovation needed to maintain battlefield competitiveness. Thus, for example, a local company partnering with a US arms manufacturer might learn how to construct a modern battle tank, but it is likely to still face

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14 Smith, M., 2023. UAE and Saudi Arabia race to develop defence industries. Arabian Gulf Business Insight, <https://www.agbi.com/analysis/uae-saudi-arabia-homegrown-defence-industries/>.

15 Ibid.

16 Aljawareen, A.F., 2017. Innovation in the GCC countries: An economic analysis. *Journal of Economics*, 5(4), pp.51-62.

17 Iqbal, A., 2011. Creativity and innovation in Saudi Arabia: An overview. *Innovation*, 13(3), pp.376-390.

18 Ben Belgacem, S., Khatoun, G. and Alzuman, A., 2023. Role of Renewable Energy and Financial Innovation in Environmental Protection: Empirical Evidence from UAE and Saudi Arabia. *Sustainability*, 15(11), p.8684.

19 Engel, J.S. and Del-Palacio, I., 2011. Global clusters of innovation: the case of Israel and Silicon Valley. *California Management Review*, 53(2), pp.27-49.

20 Vats, A., Serrano, M., 2016. Military self-reliance in the GCC: From purchasing power to industry powerhouse.



great difficulty in developing more advanced versions of that tank in response to evolutions in battlefield requirements.

This is where broad-ranging innovative capabilities play a role, as many of the drivers of innovation at the national level are common to all sectors, such as having good quality education and an abundance of venture capital. The 12 countries that have the highest share of global arms exports all have high levels of innovation across many sectors, with the only exception being Russia<sup>21</sup>. Thus, while what Saudi Arabia and the UAE are trying to achieve is not impossible, it is highly challenging nonetheless.

This reality is reflected in the fact that many of the positive headline revenue figures reported above mask significant levels of subcontracting to established global partners<sup>22</sup>. Haena Jo<sup>23</sup> remarked that: “The UAE’s equipment exports to date have been relatively low-tech, and the country still relies on technology transfers to remain prominent among competitors,” while Albert Vidal<sup>24</sup> claimed: “Locally manufactured products tend to be more expensive than those procured from foreign suppliers, due to the need to invest in R&D and the necessary facilities to scale up production.”

It is also worth noting that the innovation success that both countries have had comes in sectors in which they have a compelling comparative advantage. In the case of hydrocarbons, this is self-evident; while in the case of renewable energy, much has been focused in solar power, which partially reflects the favorable climatic conditions that both countries can naturally leverage<sup>25</sup>.

Also in the economics vein, economists specializing in development have emphasized investment in sectors that create “knowledge spillovers” to other sectors<sup>26</sup>. That means that research effort in the sectors of focus yields innovations that apply both within that sector and in other ones. Moreover, it is preferable that the sector being invested in be one with dense interlinkages with other sectors in the economy, so that even if the innovations therein have limited scope, the growth of that sector spurs the growth of other sectors<sup>27</sup>.

Notably, military manufacturing is not among the sectors that typically satisfy these criteria. While there are worse sectors to invest in in terms of spurring growth in the economy as a whole, there are certainly better ones, too. For example, in the innovation spillovers domain, the research and development conducted in military laboratories is highly secretive and therefore poorly suited for stimulating parallel innovation in other

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21 Statista, 2023. Market share of the leading exporters of major weapons between 2018 and 2022, by country. <https://www.statista.com/statistics/267131/market-share-of-the-leading-exporters-of-conventional-weapons/>.

22 Smith, M., 2023. UAE and Saudi Arabia race to develop defence industries.

23 Jo, H., 2021. Can the UAE emerge as a leading global defense supplier? Defense News, <https://www.defensenews.com/digital-show-dailies/idex/2021/02/15/can-the-uae-emerge-as-a-leading-global-defense-supplier/>.

24 Vidal, A., 2023. Saudi Arabian Military Industries (SAMI): Fueling the Growth of Saudi Defense Industry.

25 KAUST, 2019. KAUST launches ACWA Power Center of Excellence for Desalination and Solar Power. <https://www.kaust.edu.sa/en/news/kaust-launches-acwa-power-center-of-excellence-for-desalination-and-solar-power>.

26 Aghion, P. and Jaravel, X., 2015. Knowledge spillovers, innovation and growth. *The Economic Journal*, 125(583), pp.533-573.

27 Cherif, R., Hasanov, F. and Zhu, M., 2016. Breaking the oil spell: The Gulf falcons' path to diversification. International Monetary Fund.





sectors. And in terms of interlinkages, in almost all cases, the domestic consumption of arms is the government, and they do not operate as an intermediate element of a long supply chain that is interlinked with other sectors. Accordingly, if SAMI discovers a way of cutting the cost of manufacturing machine guns by 30%, there is no downstream sector that can seize upon those cost advantages to produce its own goods more efficiently.

The GCC countries have direct experience with this phenomenon in another sector. While Saudi Arabia has had considerable success in research and development in the petrochemicals domain, the limited interlinkages within the domestic economy – and the limited transferability of the research discoveries to other sectors – have meant that the innovation-driven growth of this sector has not spurred significant growth in other ones.

These economic considerations blend into security ones when one considers that a key input into many of these advanced military products – semiconductors – will remain outside the technical capacities of any Saudi or Emirati domestic military manufacturers for the foreseeable future. Moreover, the constant cycle of technological advancement required to remain competitive is likely to take a long time to achieve. This problem becomes more acute when one notes the considerable difficulty of procuring the requisite human capital, as the local talent pool is unlikely to satisfy the needs of high-tech military manufacturing.

In contrast, the lower-tech products that can be on-shored with comparative ease, such as small arms, are the ones where there are an abundance of suppliers in the global market, many of which are either capitalistic enough or physically close enough to minimize the threat of supply chain disruptions.

Hence, the areas where autonomy is most likely to be achieved are the ones where market forces offer high levels of autonomy, limiting the strategic value of the investments. Meanwhile, the areas where autonomy is most valuable are likely to remain unfeasible. The gravest military and security threats that Saudi Arabia and the UAE have faced in the recent past – such as those relating to missiles, drones, and cyberattacks – require countermeasures that tend to occupy the highest rungs of the military technology ladder, such as air defense systems. Many years of wide-ranging investments are needed if the two countries are to effectively localize production of the appropriate military hardware.

Ultimately, the theoretical lens through which to examine these investments is opportunity cost, i.e., the alternatives that are foregone when Saudi Arabia, the UAE, and others allocate scarce resources to military manufacturing. The economic visions that each of these countries is currently implementing contain a litany of large-scale programs competing for the same funds that might potentially finance domestic military manufacturing.

For example, Saudi Arabia wants to become a world leader in anti-aging research, to manufacture electric vehicles, to increase the number of pilgrims by several orders of magnitude, and to become a civil aviation hub. These headline investments are complemented by more basic ones in infrastructure, education, and healthcare. The UAE finds itself in a similar position, albeit with different points of emphasis, such as artificial intelligence and luxury real estate. Policymakers in both countries are faced with difficult cost-benefit analyses as they pursue their long-term interests.



## Conclusion

In conclusion, the enthusiasm that Saudi Arabia and the UAE are demonstrating – and that other GCC countries are arguably harboring – for the development of domestic military manufacturing is an understandable response to the multiplying security threats they face, and to the perceived lack of reliability in their traditional sources of security. This also explains their growing interest in source diversification, though this option is not available for certain advanced military products. In principle, with enough patience, these investments may well achieve the twin goals of creating a more stable supply of weapons, and of contributing to job creation and economic growth.

However, as all students learn during the first class of economics 101, the key question regards the opportunity cost of such investments. These projects require billions upon billions of dollars to have a chance of success – let alone guarantee it, and these funds have many other enticing prospective targets for application. The transition from an economy dependent upon hydrocarbons to a modern knowledge economy requires huge amounts of capital, and so governments need to be extremely judicious in how they allocate the scarce volumes available.

Should the Saudi and Emirati governments maintain their belief in the value of investing in domestic military manufacturing, the rate of return is likely to be much higher if they ensure complementary investments in the fundamental drivers of innovation across the economy as a whole. An educated workforce, a vibrant credit market, a university system that has strong ties to industry, and so on are all factors that should receive a lot of attention from policymakers, as creating an island of innovation and productivity confined to arms manufacturing is both improbable and inefficient.

It is for this reason that small states generally favor strategic international partnerships for the maintenance of their security over the development of domestic military manufacturing. The UAE is a borderline small state due to its population, though Saudi Arabia is certainly not a small state; nevertheless, advanced military production has been concentrated in a small number of countries for centuries for good reason. Moreover, procuring weapons from countries with powerful militaries does buy good will that extends beyond supplying the arms.

Ultimately, it is difficult to make a definitive judgment about what best serves these countries interests because evaluating the advantages requires intimate knowledge of state security secrets – knowledge that the author of this essay certainly does not possess. However, even without this information, success for Saudi Arabia and the UAE will require high levels of strategic patience and a willingness to introspect deeply about the potential barriers to high level innovation.



# PRISME

Pathways to Renewed and Inclusive  
Security in the Middle East



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# 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.