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USSBC Economic Brief
Defense Sector Update

Overview

The U.S. and Saudi Arabia are among the top defense spending countries in the world and the defense sector continues to rank as the highest value segment of U.S. exports to the Kingdom. Since 2017, over SAR101 billion ($27 billion) in foreign military sales (FMS) have been delivered to Saudi Arabia by the U.S. The General Authority for Military Industries (GAMI) has estimated that around 95 percent of military spending currently goes to foreign companies, of which U.S. companies constitute most of the value. Consequently, attracting U.S. defense firms to aid in the localization of Saudi Arabia's defense industry will bring the Kingdom's Vision 2030 development strategy closer to fruition.

A core ambition of the country's Vision 2030 development strategy is 50 percent localization of Saudi Arabia's defense industry. The government aims to develop its domestic military industry that will require a steady supply of raw materials, a qualified local workforce, and the transfer of knowledge and technology from foreign companies. This strategy aims to make SAMI, the newly established Saudi Arabian Military Industries, among the top 25 military industrial companies in the world. SAMI is guiding the development of new and existing local industries with the goal of developing new intellectual property and manufacturing products and services that can scale up the local Saudi defense sector.

In recent years, an expanded role of local maintenance, repair, and overhaul (MRO) work and growing local manufacturing capacity has initiated a sectoral transformation. The demand for U.S. companies in providing defense equipment and services, including licensed production and training, will remain high as the Kingdom navigates the implementation in Vision 2030. Strategic partnerships, from joint ventures to university collaboratives, all represent opportunities for foreign companies to participate in the development of the Saudi defense industry.

Sector Dynamics

Defense Spending

Saudi Arabia ranks as the world's fifth largest sovereign spender on military & defense, according to the Stockholm International Peace Research Institute (SIPRI). During 2020, the U.S. remained the world's largest exporter of arms while Saudi Arabia remained the world's largest importer. The U.S. accounted for 37 percent of global arms sales during the period of 2016-2020.

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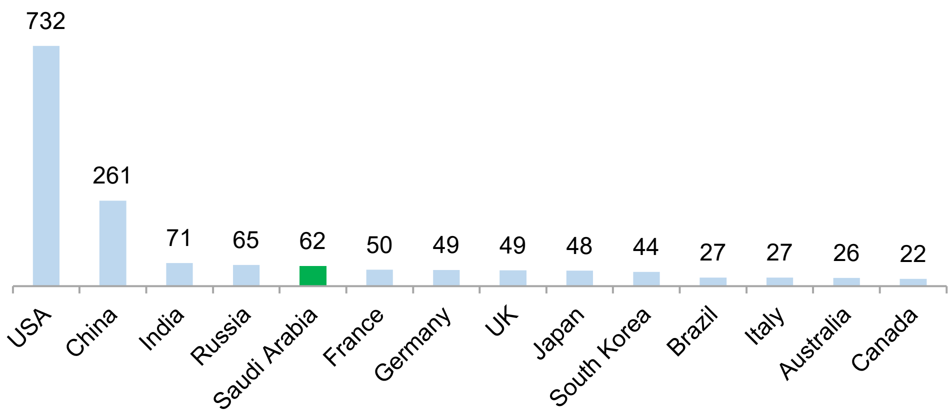
The top 15 countries in terms of military expenditures average 4 percent of GDP in military spending, while Saudi Arabia's military expenditures totaled 7.4 percent of GDP in 2020. Saudi Arabia's budgeted military spending grew steadily from 2008 to 2015, growing 77 percent over the period. However, the International Monetary Fund's (IMF) GDP projections and Saudi Arabia's budget for 2021 suggest that military spending as a percentage of GDP will decline to 6.5 percent in 2021. Defense spending has fluctuated below its 2015 level due partially to lower oil prices since 2015 and a transition towards greater involvement by the Public Investment Fund (PIF) and the private sector in defense-related projects.

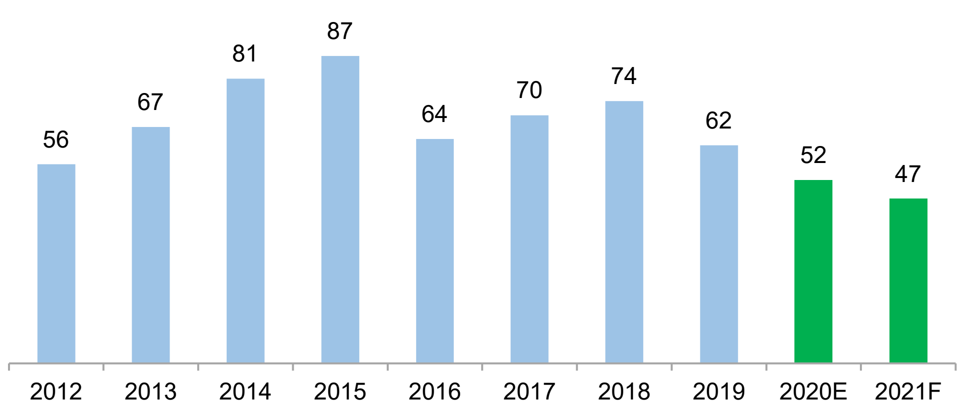
Military Expenditures by Country
(Billion USD)



Source: SIPRI

The government announced a SAR175 billion ($47 billion) allocation for the military sector in 2021, a 10 percent decrease from the SAR195 billion ($52 billion) in estimated military spending for 2020. Actual estimated spending exceeded the budgeted level by 7 percent. Defense spending in 2020 and 2021 is expected to remain below 2019 levels, reflecting a broad-based reduction in overall expenditures as the Kingdom aims to cut its budget deficit in 2021 by 53 percent. This places the military sector behind only education spending which will total SAR186 billion ($50 billion) and tied with health & social development spending which will total SAR175 billion ($47 billion) in 2021.

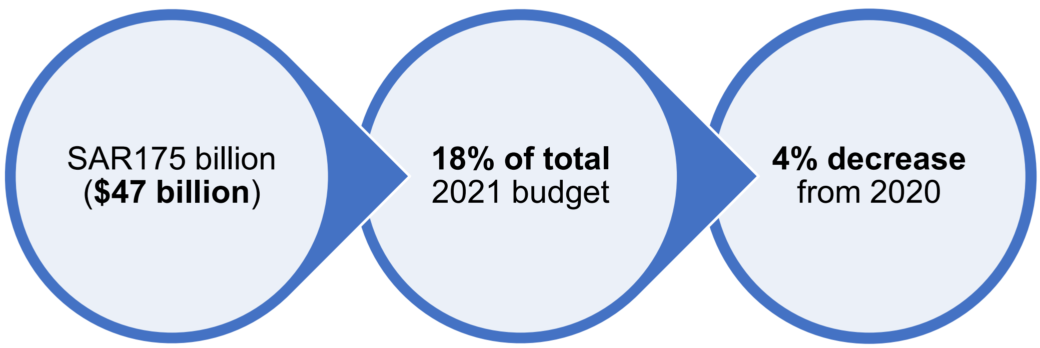
Saudi Arabia Annual Military Expenditures
(USD Billion)



Source: SIPRI (2012-2019), Saudi Ministry of Finance (2020-2021)

According to the government's 2021 budget statement, military spending encompasses "national defense, the Royal Guard, developing military capabilities, military cities and bases, hospitals and military medical services, military colleges and universities, nationalization of military industries, and military research" across 19 governmental entities. Key 2020 project achievements included the initiation of the first phase of King Salman Airbase facilities construction, the first phase implementation of the King Faisal Air Academy relocation, and increasing the capacity of the Security Forces Medical Complex by 200 percent. According to the USSBC Contract Awards Index database, the King Salman Airbase and King Faisal Air Academy projects will cost SAR7.5 billion ($2 billion) each and were awarded to a consortium of local construction firms. Projects that are earmarked under the 2021 military budget include completing 80 percent of the operating plan within the Ministry of Defense's 10-year plan, the second and final stages of the King Salman Base and King Faisal Air Academy relocation projects, and defense capacity-building across 8 military entities.

Saudi Arabia's 2021 Defense Budget



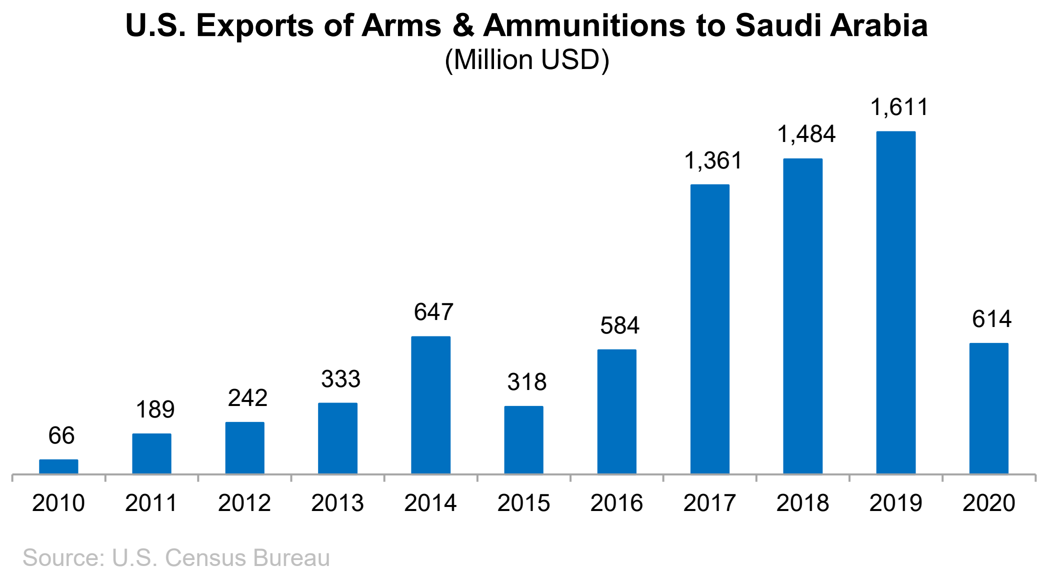
Source: Ministry of Finance

Recent Developments with U.S. Defense Firms

U.S. defense companies play a significant role in Saudi Arabia's defense sector with Lockheed Martin, Raytheon, Boeing, Northrop Grumman, General Dynamics, and L3Harris having longstanding ties to the Kingdom's defense entities. These relationships have involved the trade of military aircraft and parts through foreign military sales (FMS), ground combat technologies, intelligence, surveillance, and reconnaissance (ISR) technologies with associated MRO service provisions, and economic offset programs that enable the transfer of knowledge and technology to Saudi entities.

Major recent military hardware deliveries from the U.S. to Saudi Arabia have included the delivery of 23 Patriot PAC-3 air and missile defense systems between 2014 and 2018 and the delivery of 154 Boeing F-15SA combat aircraft in 2016. In 2017, the U.S. secured a SAR413 billion ($110 billion) arms deal which included multiple THAAD missile systems and various air, ground, and naval vehicles and munitions contracts. In 2020, Boeing was approved to deliver SAR1.1 billion ($290 billion) small diameter bomb munitions procurement and signed a potential 10-year, SAR37 billion ($9.8 billion) contract to modernize

Saudi Arabia's F-15 aircraft fleet. Other major sales to Saudi Arabia have included high mobility multi-purpose wheeled vehicles, light armored vehicles, Blackhawk and Chinook helicopters, and multi-mission surface combatant ships.



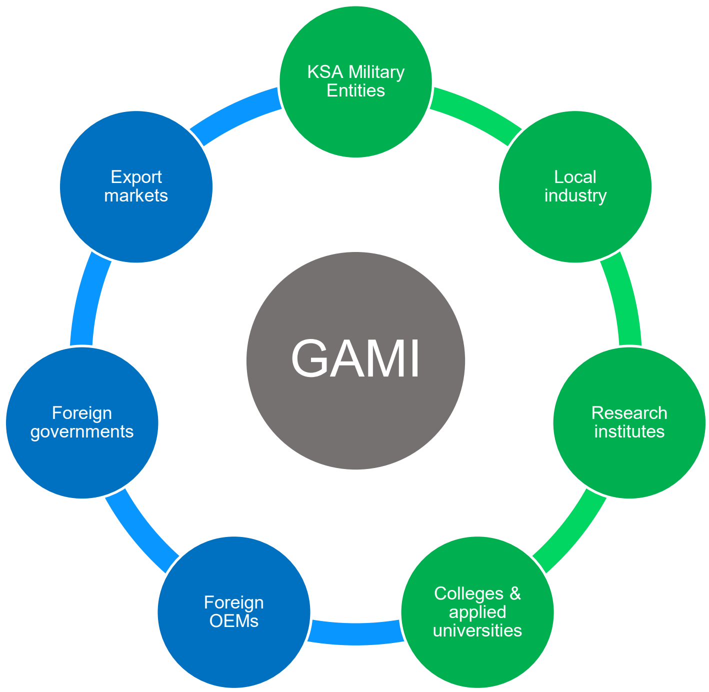
Saudi Arabia's U.S.-manufactured military vehicles and equipment require routine maintenance and repair activity, providing a steady demand for parts. These goods also provide opportunities for MRO localization and knowledge transfer. As the Kingdom pursues the transfer of military knowledge and technology, localization of defense capabilities, and jobs for Saudi citizens, U.S. companies are expected to have a continued role in supporting the development of the sector.

Sector Driven Goals

Government-led Initiatives

GAMI has a dual mandate to support local manufacturers and establish strategic partnerships. Local industry includes SMEs in addition to SAMI entities, the establishment of industrial clusters for the defense sectors, and alignment with adjacent industries to meet market demands. Strategic partnerships will involve engagement with international original equipment manufacturers (OEMs) through joint ventures, technology and knowledge transfer, and offsets to support local export capacity. As Saudi defense manufacturing capacity grows, GAMI is also expected to engage foreign export markets to establish deals and terms of support. GAMI is also responsible for managing procurement contracts, licensing, and industry regulations.

SAMI, which is 100 percent owned by the PIF, has acquired both Aircraft Accessories & Components Co. Ltd. (AAC) and Advanced Electronics Company (AEC). AAC is part of the Ministry of Defense's economic offset program and has longstanding ties with U.S. defense companies while AEC, also originally an economic offset company, is one of the Kingdom's most established local defense manufacturing companies. SAMI has also established joint venture agreements with several international companies, including U.S. companies L3Harris Technologies and Lockheed Martin as well as Spain's state-owned shipbuilder Navantia, France's Thales Group, and Belgium's CMI Defense. SAMI is positioned to be the national domestic military manufacturing company through further acquisitions, local investments, and international partnerships.



The Private Sector's Growing Role

In addition to the management and growth of SAMI, the PIF is actively seeking to grow a private sector defense and security ecosystem in Saudi Arabia by backing research & development in emerging technologies through TAQNIA Defense and Securities Technologies and Saudi Arabian Defense Electronics Company (SADEC). These initiatives involve partnerships with universities such as King Abdullah University of Science & Technology (KAUST) and the Prince Sultan Defense Studies & Research Center (PSDSARC) under King Saud University.

National employment remains a primary goal of localizing the defense industry. According to GAStat's Q4 2020 labor market report, 'public administration and defense; compulsory social security' totaled 240,000 workers of which 71 percent was Saudi and 29 percent was non-Saudi. At AEC, around 85 percent of employees are Saudi nationals, including 500 engineers, according to industry sources. Substantial investments in the higher education ecosystem in Saudi Arabia in recent decades has led to the progression of the Kingdom's human capital capabilities in the fields of engineering and international business. Consequently, the SAMI L3Harris Technologies, LLC joint venture plans to hire nearly all Saudi citizens for its open roles (See our In Focus section). The SAMI L3Harris Technologies, LLC JV illustrates a successful model for U.S. and Saudi companies, which provides commercial opportunities for U.S. companies and meets Saudi Arabia's goals of localization, knowledge transfer, and economic offset.

In Focus: Key Insights From Hogan Wilson, CEO of the SAMI L3Harris Technologies, LLC Joint Venture

L3Harris' First Mover Advantage with SAMI JV

"L3Harris is the first U.S. defense company with a fully registered and operational SAMI joint venture and we are very proud of that. I feel good that L3Harris' vision for partnership was really ahead of the game and SAMI has been a great partner to help jumpstart our progress."

Working with SAMI

"From my experience, the opportunity to work with the defense industry champion in SAMI has been tremendous because, a company like L3Harris has the opportunity to work in partnership with an entity who has a major investment partner in the PIF. SAMI and PIF bring financial backing and intimate relationships with MOD, GAMI, and local industry while L3Harris brings know-how in product development, research and technology, and advanced exportable defense solutions. Working hand-in-hand to develop the joint venture in the Kingdom has given L3Harris the opportunity to accelerate relationships and achievements toward Vision 2030."

Aligning and Implementing Saudization

"L3Harris currently has three separate operating entities in the Kingdom of Saudi Arabia, including one which supports an FMS-focused program, exclusively. The other two are virtually all Saudi citizens. As we grow the joint venture, SAMI L3Harris plans to hire Saudi citizens, with very few exceptions, to fill its key roles. What we've found is Saudi citizens come with great educational backgrounds and aptitude for the defense business.

Many of them come with major industry knowledge already present in the Kingdom like petrochemical, international business, trade, and with strong finance backgrounds. From what we have found, Saudi has a great young population of highly educated citizens that are very adaptable to learning the defense industry. In terms of the joint venture, we have already embarked on hiring Saudi citizens to fulfill that obligation. We are very pleased with that progress."

Role of Technology Transfer

"Establishing the joint venture gives our company the opportunity to take exportable background IP and put it into an independent and jointly owned entity. The joint venture can then take the technology and customize it to develop truly sovereign Saudi capabilities."

Potential for 'Made in Saudi'

"There is a great opportunity for the JV to leverage Saudi Arabia's engineering expertise: software, hardware manufacturing talent and other industry partners to localize capabilities. I also see an opportunity down the road, and with appropriate export approvals, to sell these new, enhanced capabilities from a 51% Saudi owned company, like our JV, to GCC and other parts of the world as 'Made in Saudi'."

Main Sector Challenges

According to GAMI estimates, current local spending is around 5 percent, suggesting a significant uptick in development will be needed to meet the ambitious goal of 50 percent localization of military spending by 2030. The primary challenges that have limited investments and development in the Saudi defense sector include:

- New sector with limited infrastructure
- Restrictions on transfer of intellectual property and technology from foreign agencies
- Difficulty in securing large order quantities over the long-term
- Need to increase the transparency of projects and procurement processes
- Differences in procurement processes and standards between foreign OEMs and Saudi entities

As Saudi Arabia continues to pursue a reform agenda in line with attracting foreign businesses and direct investments into the Kingdom, procurement and project transparency are expected to improve to facilitate ease of entry for foreign OEMs and investors. Early signs of progress in Saudi Arabia's defense manufacturing capacity include the deployment of the first domestically produced fast jet aircraft, the BAE Systems Hawk, in late 2019. In 2020, the Ministry of Defense and GAMI announced the launch of Saudi Arabia's first locally manufactured HS132 speed interceptor boats by Zamil Offshore Services in partnership with France's CMN Group as well as a joint venture between Oshkosh Defense and Al Tadrea Manufacturing Company to manufacture armed vehicles in-Kingdom. In November 2020, Saudi Advanced Technologies Company (Wahaj) was licensed by BAE Systems to manufacture consumable and complex structural components as part of the supply chain for the Eurofighter Typhoon combat aircraft. Saudi exports of arms, ammunition and parts remains a small segment of its overall exports, accounting for SAR208 million ($56 million) in 2020, but the segment grew 0.5 percent YoY even as most goods categories declined due to the impact of the global pandemic.

Sector Opportunities

Partnerships to Strengthen the Domestic Sector

Changes in the Saudi defense sector represent both opportunities to build on existing relationships and to establish new partnerships in emerging defense technology fields. While GAMI has identified several equipment and technology areas for localization, the process will take time and require the expertise of established international OEMs and technology service providers. More recently, there has been a shift away from bringing existing technology through foreign military sales (FMS) to developing new technologies in the Kingdom. Saudi Arabia's announcement in early 2021 requiring foreign companies to establish their regional headquarters in the Kingdom to consider awarding government contracts to them by 2024 will provide greater opportunities for increasing local content.

SAMI's consolidation of the defense sector through acquisitions, including top Saudi defense companies AEC and AAC, is expected to provide a clear development agenda for international companies and a long-term vision for specific localization strategies. For example, following AAC's acquisition by SAMI, the scope of MRO operations was expanded from aircraft hydraulics and secondary power systems to MRO on civil aircraft landing gear, nondestructive testing capabilities, and helicopter maintenance. Defense localization is expected to follow a logical progression of 1) MRO capabilities for products and services already active in-Kingdom, 2) Domestic manufacturing capabilities of some components through knowledge transferring, 3) Integration of local engineering and technology transferring to enable indigenous modification capabilities, and ultimately 4) full Saudi capability to design, develop, and maintain defense-related products and services.

GAMI's Industrial Participation program involves agreements with contractors to include local industries in the supply chain and ideally build new capabilities that will contribute to self-sufficiency in targeted sectors. The program creates opportunities for both direct and indirect participation of qualifying local industries in supply contracts. The Industrial Participation program is aimed at enabling the private sector to contribute to the defense industry by working with OEMs that will 1) meet local industry demand, 2) boost Saudi exports, 3) build domestic capabilities, and 4) contribute to human capital and domestic R&D.

Targeted military technologies by GAMI include EO/IR, directed energy, radar, RF radio, cybersecurity, electromagnetic weaponry, and AI/machine learning.

Defense Sector's Technological Diversification

In the EO/IR field, advanced IR targeting, multispectral, and hyperspectral imaging technology are technologies of high interest. GAMI signed a SAR750 million ($195 million) agreement with local firm INTRA Defense Technologies to procure six unmanned aircraft systems with advanced EO/IR capabilities and the SAMI L3Harris Technologies, LLC joint venture also pertains to the deployment and development of advanced EO/IR capabilities. Other advanced digital technologies including blockchain encryption, machine learning applications across data gathering, threat identification, and communications represent opportunities for U.S. information technology companies. The development of a national champion defense company in SAMI will require further strategic partnerships, international OEMs, JVs, offset programs, and technology transfer over the course of the next decade.

While local electronic and digital capabilities are high priorities for Saudi Arabia, MRO contracts are expected to continue playing a role in the progression of Saudi defense localization. Background intellectual property (IP) attainment through joint ventures remains a key strategy for SAMI and defense entities and MRO contracts are an established path towards this end. Increasingly, the creation of IP in-country through partnerships at local universities and R&D hubs is also a priority. In line with this shift in strategy, OEMs not using materials sourced from within the Kingdom are less likely to have the highest priority among contracting entities. International OEMs may increasingly need export controls teams to remain compliant with the developing regulations in Saudi Arabia.

As Saudi Arabia aims to boost its defense exports and achieve 50 percent localization of military spending by 2030, advanced U.S. defense manufacturing and FMS will continue to play a significant role for the sector and U.S. knowledge transfer through defense and technology companies remain a critical component of GAMI's Industrial Participation program.