

Rising Challengers

Ambitious New Defence Exporters Are Reshaping International Defence Trade

Heiko Borchert

The defence industries of South Korea, Turkey and the United Arab Emirates are forcefully entering global defence markets. What are their strategies, and what are the implications for European competitors?

Ambitious emerging defence companies are changing the face of the global defence business. Most of them adhere to a traditional understanding of sovereignty: the government plays a central role, hard power is an important indicator of national sovereignty, and armed forces are key. Many European countries consider this approach outdated. Europe tends to downplay the political relevance of hard power; as a consequence, defence procurement budgets are decreasing. Defence suppliers looking for markets are therefore increasingly turning to the Greater Middle East, the Asia Pacific region and Latin America. But ambitious countries in these regions are no longer satisfied with simply buying defence products. They are striving for co-production, establishing their own manufacturing capacities and technological capabilities and boosting defence exports. This is changing the balance of the market.

New challengers are breaking into a global defence export business that up to now has been largely dominated by the United States and Russia. According to statistics from the Stockholm International Peace Research Institute (SIPRI), these two countries accounted for 56% of global defence supplies from 2000 to 2013. Among the new challengers, China is playing in a geostrategic league of its own, but Turkey, South Korea and the United Arab Emirates (UAE) share many similarities. In these countries, governments set the strategic guidelines, hold financial stakes in the major companies, finance defence-related research and

development (R&D), and promote defence exports. Offset and transfer of technology requirements are vital for building up local defence industrial capabilities, and overall these countries use their armaments policy as a political currency. Booming defence

countries in the region and beyond. But this strategy is risky: domestic consensus on President Erdogan's policy is fragile, and Ankara's zero problem policy has led the government to ignore strategic vulnerabilities in the past that are creating problems today (for example Syria and Kurdistan). Three aspects define South Korea's geostrategic environment. First, threats emanating from North Korea shape Seoul's defence capability and armaments priorities. Delaying the transfer of operational control in peacetime and war from the United States to South Korea is the sec-



The T-50 Golden Eagle is a family of South Korean supersonic advanced trainers and multirole light fighters, developed by the consortium that was established by Korea Aerospace Industries (KAI) along with the American aerospace company Lockheed Martin.

exports demonstrate that governments can successfully establish high-technology industries. This justifies and legitimizes the government's strong hand on the domestic front. In addition, defence exports are vital for exerting international influence by establishing and cultivating strategic partnerships.

Different Geostrategic Settings

Turkey aims to become a core regional actor. In alluding to the zone of influence of the former Ottoman Empire, Turkey follows a clever branding strategy that portrays the state as a preferred partner for Islamic

and important characteristic. Deferring this decision prolongs South Korea's strategic dependence on the United States and further strengthens the already dominant role of U.S. defence suppliers in the country. Finally, economic ties between China and South Korea are growing, which prompts the question as to whether Seoul can maintain the balance between security and economic loyalties or if Beijing will replace Washington as South Korea's key strategic partner.

A different dynamic is at play in the Greater Middle East. The six members of the Gulf Cooperation Council (GCC) follow individual foreign and security policy interests but are increasingly willing to use the GCC

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(Photo: Abu Dhabi Shipbuilding)

Shipyard installations of Abu Dhabi Shipbuilding in the UAE

to adjust their activities. This strengthens the role of the Peninsula Shield Force as a mechanism to coordinate military cooperation. So far, Saudi Arabia has played the leading role, but Qatar and the Emirates have significantly increased their political stature in recent years. The Emirates are more active than their neighbours in pushing cooperation beyond the GCC to diversify political relations. Among others, the Emirates cooperate with the United States, France and the United Kingdom, as well as with Russia, Singapore, South Africa, South Korea and Turkey.

The Government's Very Visible Hand

In Turkey, the government holds stakes in several leading defence companies, in particular the national champions Aselsan, Roketsan and TAI. The government shapes interaction between these national champions and other national suppliers, research institutes and technology clusters. In addition, the government operates its own very effective defence capacities, such as the naval yards. By contrast, privately owned defence companies have a hard time. This was illustrated in 2013 when RMK Marine,

which is part of the Koç family conglomerate, lost the contract for six new MILGEM corvettes following rumours of alleged irregularities during the competition. Over the years, Turkey has developed a very productive national defence industry. The land systems and naval and missile industries are the cornerstones, whereas the aerospace industry still depends on foreign partners, in particular for advanced propulsion systems. Turkey is ramping up its efforts in the fields of electronics and information technology, with the government paying specific attention to beefing up cyber security. South Korea's government holds stakes in Korea Aerospace Industries and Daewoo Shipbuilding and Marine Engineering (DSME) but uses technology and product development as its main inroad to shape the defence sector. Most importantly, it is the government that holds intellectual property rights (IPR) in the defence sector. The Agency for Defence Development (ADD) and the Defence Acquisition Program Administration (DAPA) are the key players. DAPA sets out strategic guidance for future weapons developments. With the support of ADD, DAPA also selects the relevant project participants. Defence companies are critical of this arrangement, as

ADD is said to influence product design to its own advantage. ADD also operates as the sector-wide system integrator, putting together the components co-developed by private defence companies. With this, ADD acts as the ultimate balancer among South Korea's Chaebols, the dominating family-owned business conglomerates. The geo-strategic setting has a direct impact on the strengths and weaknesses of South Korea's defence industry. All weapon systems supporting the army to defend the country against aggression from the north can be considered areas of strength, in particular the land systems industry. By contrast, in parts of the naval and aerospace segments South Korea continues to depend on foreign partners.

The Emirates leverage the dual-use nature of defence and aerospace, heavy industries, telecommunications and life sciences to diversify the national economy. When it comes to defence, the UAE has put a major emphasis on establishing local industrial capacities in the fields of precision guided missiles, cyber security, unmanned aerial systems (UAS) for intelligence and reconnaissance as well as unmanned combat aerial systems. In addition, the UAE defence industry has basic capacities to develop, produce and maintain land systems and has manufacturing capacities for munitions. The naval industry is well established, with Abu Dhabi Shipbuilding as the main actor, whereas the aerospace industry focuses mainly on maintenance, repair and overhaul. Right now, the defence industry is being overhauled by establishing the Emirates Defence Industries Company (EDIC), the new home of many different companies.

Offset and Transfer of Technology as Key Levers

From 1998 to 2012, foreign defence suppliers signed offset requirements worth around US\$17.6bn with Turkey. By the end of 2012, defence offset obligations worth US\$8.4bn were delivered – around 70% were met through Turkish defence exports. This exemplifies the key role of offset to internationalize the Turkish defence industry. The offset policy as set by the Undersecretariat for Defence Industries (SSM) is demanding, with offset requirements worth at least 70% of the contract volume and no minimum threshold. Transfer of technology is key to fulfilling offset obligations. Current SSM priorities – software development, command and control systems and electronic warfare – provide a glimpse into future preferences. To advance knowledge and technology transfer, SSM and the Mid-

dle East Technical University have set up a special programme to align research and defence industrial priorities. In addition, industry cluster and technology parks are important offset instruments, as they bring together all relevant national stakeholders and international partners.

DAPA is the key player in South Korea's offset policy. Offset worth 50% and more is due for contracts above US\$10m. DAPA is ready to make concessions based on government-to-government (G-to-G) agreements with foreign partners. There are different ways to meet offset requirements, including technology transfer, export for local defence suppliers, joint R&D projects and technical training for South Korean R&D personnel. In principle, foreign direct investment (FDI) could help meet

looking for. Overall, the UAE offset policy follows closely in Turkey's footsteps, which underlines the country's ambition. The fact that the former Offset Program Office has been transformed into the influential Tawazun Holding, which maintains stakes in the country's leading defence companies, is widely seen as a success. But challenges remain. In particular the lack of qualified local workers is a major problem. Out of 8.2m people living in the Emirates, only 10-15% are Emiratis. Shortfalls in the indigenous workforce seriously limit technology and know-how transfer and slow down the growth of the local defence industry. The significant proportion of foreign workers creates additional challenges concerning preventing unwanted disclosure of sensitive know-how and technology. The lack of

realistic, as offset requirements worth more than US\$9bn need to be met by 2020. Turkey prioritizes defence exports to the GCC and North Africa, Central Asia and the Caucasus, the Asia Pacific region, NATO and EU countries and Latin America. To enter foreign markets Turkish defence suppliers are leveraging their expertise in maintaining and upgrading Western defence platforms. Transfer of technology also plays an important role in defence exports. Turkey's international defence suppliers must meet demanding requirements to enable re-exports to third countries. At the same time, Ankara wants to maintain its technological lead over third countries and acts cautiously when exporting its own technology. Along with the country's industry associations, leading government officials actively promote Turkish defence products. This provides opportunities but also entails risks. Egypt is a case in point. The Turkish industry has benefited from close political links with the Egyptian government of former President Mohammed Morsi, but prospects have dimmed since Morsi's fall.

South Korean defence exports that reached US\$2.3bn in 2012 are to be increased to US\$4bn by 2020. The government actively promotes defence exports with the help of regional strategies, financial aid and G-to-G agreements. So far, South Korea has not developed specific export configurations but sells national defence products such as the KAI T-50 Golden Eagle trainer and multirole fighter, K-9 Thunder self-propelled howitzer, naval ships and submarines. South Korea's most important defence export markets include the Asia-Pacific region (particularly Indonesia and the Philippines), North America and the Greater Middle East (for example, Iraq). The UK and Norway have picked DSME to provide new support vessels. In addition, Seoul maintains a strong interest in the Polish defence market. South Korea's R&D priorities mirror the country's export ambitions. Current priorities include surveillance and reconnaissance; precision-guided munitions, missiles and torpedoes; unmanned systems; protection technology; and air defence. These priorities fit into the geostrategic situation on the Korean peninsula and are relevant for other theatres around the globe. Thus, it is fair to assume that these priorities are meant to prepare for South Korea's second wave of defence exports.

Until recently, defence exports from GCC countries have been negligible, but things are changing rapidly, in particular in the Emirates. The Emirates have a tendency to "buy too much" and then have to offload overstock through re-exports and



Among others, Roketsan's CIRIT missile has been proposed as a replacement for the unguided rocket weaponry of the Tiger attack helicopter.

offset obligations, but DAPA is reluctant to promote FDI, as the agency wants to strengthen local production capabilities. Foreign suppliers should be aware that DAPA and not the local defence industry holds IPR transferred to South Korea. This reinforces DAPA's pivotal role in the South Korean defence sector.

In the Emirates, offset serves the strategic goal of industrial diversification. Thus, the country's general offset policy is also relevant for the defence sector. The Emirates are prioritizing land, naval and aerospace systems, with a focus on unmanned systems, precision-guided missiles and electronics. Design, engineering, systems integration and manufacturing are among the functional key areas that the Emirates are

local workers also inhibits the government from swiftly evaluating and approving offset proposals. This, in turn, delays cooperation programmes with international partners.

Government Support for Defence Exports

For 2023, the 100th anniversary of the Republic of Turkey, the government has set an ambitious goal: Exports should reach US\$500bn, up from US\$252bn at the end of 2013. As part of this overall plan, the government also wants to boost annual defence exports. These reached a record value of US\$1.6bn in 2013 and are to be increased to US\$2bn in 2023. This seems

hand-over to third countries like Egypt and Jordan). Investments in local defence manufacturing capacities are a means to provide local job opportunities, but export ambitions are the main driver. Exports to meet offset obligations play an important role for the UAE as well, which is why the Emirates cooperate with partners that follow ambitious export plans. It is no surprise, therefore, that joint venture companies established with Turkish partners primarily target exports to the Greater Middle East, North Africa and Asia. The Emirates' current drive to sell UAS could be a harbinger of future activities. Russia is testing UAS made by Adcom, and the Emirates are negotiating with neighbouring GCC countries and Algeria. The UAE also tried to sell its UAS to France, but this attempt failed due to lack of interest on the French side.

All-Round Carefree Financing

In Turkey, R&D for the defence, aerospace and space industries is part of the national strategy for science, technology and innovation. According to SaSad, a local industry association, overall spending on R&D for these sectors was worth US\$3.1bn from 2008 to 2012. The government funded 70%, which illustrates the shortfall in corporate R&D. To complement direct funding, the government also provides indirect fiscal incentives. For example, corporate R&D in technology parks and industry clusters benefits from temporary tax exemption and reduced value-added tax on software products. In addition, the government shoulders 50% of social security payments for workers. The credit line worth US\$250m for defence exports to Egypt can be seen as further sign of the government's growing maturity in defence export promotion. This was the first time that the government had granted export credits. For the future, SSM and the Turkish EximBank are working on a system for defence export financing.

In South Korea the government is the main sponsor for defence R&D as well. According to some estimates, the government spent around US\$1.7bn or 5.6% of the 2013 defence budget on R&D, and this is likely to increase in the future. But it remains to be seen how long the government will be able to support the country's broad defence portfolio. There is also a serious gap between the Chaebols and the country's small and medium-sized companies that hampers innovation. When it comes to exports, the government makes sure that companies pay very low interest rates on export credits. If needed, the



(Photo: Piaggio Aerospace)

The UAE take part in the P.1HH HammerHead UAS programme of Piaggio Aerospace.

government is willing to subsidize prices to improve the competitiveness of South Korean products abroad.

In GCC countries defence financing is more opaque. The wealthiest GCC nations like Saudi Arabia, the Emirates and Qatar are financing their neighbours' defence procurement projects and providing financial support for other nations in the region such as Egypt, Jordan and Lebanon. In addition, the GCC nations also make smart use of their sovereign wealth funds and investment companies. These vehicles are used to acquire financial stakes in international partner companies that play a pivotal role in establishing the local defence industry. Following this pattern, the Emirati investment company Mubadala acquired the majority stake in Italy's Piaggio Aero, which helps build UAS for the Emirates.

Implications for Established Defence Exporters

For rising defence challengers like Turkey, South Korea and the UAE, establishing national defence industries, exporting defence products and advancing arms co-operation are important policy tools. As these countries progress, well-established defence exporters will need to address tricky questions to remain successful in the long run.

The defence business has always been strongly regulated by governments. The rise of new defence exporters is reinforcing this fact. Whereas European countries are striving for a common defence market with minimal government interference, governments playing a very active role dominate the defence world outside Europe. This growing dichotomy challenges European

defence companies, as they need to operate under different frameworks. They will only master this challenge if governments and defence industries form strategic partnerships to identify joint interests and define common strategies that can be implemented in tandem.

More and more, emerging defence markets are challenging current export controls by stipulating demanding transfer of technology requirements. In response, Western governments and companies must have a mutual understanding of each other's "red lines". These red lines depend on political interests and preferences and on the ability to control the flow of technology and know-how. To keep technology transfer more or less under control, defence companies and governments must establish joint technology roadmaps. These technology roadmaps must analyse the impact of technology transfer on current levels of technological maturity. Based on these roadmaps a strategic dialogue is needed to decide where concessions are acceptable, where technology advances are to be maintained and what needs to be done to retain technological superiority.

Despite soaring ambitions, even the most advanced new defence challengers remain dependent on foreign suppliers. This creates opportunities. In addition to technology, emerging defence markets need qualified personnel, and so training and the promotion of local craftsmanship in defence are growing in importance. Offering support in these areas is beneficial for both partners: emerging defence markets receive additional help to diversify national economies, and well-established defence players can blend training with technology transfer. ■