BRUSSELS SCHOOL OF GOVERNANCE
CENTRE FOR SECURITY, DIPLOMACY AND STRATEGY

Next Generation: Geoeconomics, cooperation and Japan's defence industry

Nanae Baldauff | 19 January 2023

Key Issues

- Thanks to its role in the production of the F-35 Joint Strike Fighter aircraft, including local production and maintenance support, Japan has been able to build-up its defence-industrial base.
- Japan is building up its domestic manufacturing industrial potency by focusing on policymaking that enhances its economic security and re-shoring manufacturing.
- International cooperation with allies and close partners remains key to further strengthen Japan's position as an attractive and competitive defence-industrial base.

In December 2022, Japan, Italy and the United Kingdom (UK) announced at a special summit that they would jointly develop a Global Combat Air Programme (GCAP) with a view to producing a sixth-generation fighter aircraft by 2035. The joint leaders' statement particularly highlighted the critical linkage of defence cooperation, science and technology collaboration and integrated supply chains and the hope that this would further strengthen the defence-industrial base of each partner. The GCAP is predicated on the idea of interoperability with allies and partners such as the United States (US), NATO and with partners in Europe, the Indo-Pacific and beyond.

While it is evident for Italy and the UK – the world's sixth and the seventh weapons exporters respectively – to play a major role in this endeavour, it is less clear to what extent Japan is the other indispensable player in this trilateral partnership. Despite its relaxation of strict arms export restrictions in 2014, Japan's track record in exporting arms is still dismal – for example, it has only successfully exported four air surveillance radar systems to the Philippines. That said, 2014 was an important year because it saw the release of Japan's "Strategy on Defense Production and Technological Bases", which stated that it was necessary to secure national security independence, to enhance Japan's deterrence and bargaining power and to support domestic industry through the development of advanced technologies.

Given these developments, this Policy Brief argues that Japan is set to become the indispensable manufacturing defence-industrial base in the Indo-Pacific region. To this end, we first briefly describe Japan's role in the GCAP programme and what Tokyo brings to the programme. We will then focus on some of Japan's wider defence-industrial strengths as well as the challenges that can hinder Japan's growth as a defence-industrial player in the region and globally.

What Japan brings to the GCAP table?

Although what the UK and Italy bring to the GCAP table is clear, Japan can also boast at least three factors that make it an ideal partner from a defence-industrial perspective.

Firstly, Japan serves as a fully operational F-35A model production facility with both Japan and Italy being the only two countries outside the US which have the capacity to assemble the aircraft locally (Italy produces both the F-35A and B models). The decision for local production in Japan was based on the fact that producing this highly sophisticated aircraft was cheaper than importing the F-35As from the US. In addition, Japan serves as the F-35 regional hub, sharing responsibility with Australia for maintenance, repair, overhaul and upgrade (MRO&U) for the F-35s based or operating in the Asia-Pacific region. The Japanese regional depot opened for business in July 2020. The participation of Japanese defence industries was key from the beginning. Mitsubishi Heavy Industries (MHI) are operating the Final Assembly and Check Out facility and providing MRO&U services, IHI is producing F-35A engine parts and Mitsubishi Electric are engaged in producing mission systems radars and components. Having a "Made in Japan" element to F-35A production is significant for the country's own operational capability, production base and maintenance, the Japan-US alliance and defence equipment cooperation in the Indo-Pacific and globally.

Secondly, a defence ecosystem has been built over the last several years between Japan and the UK. This ecosystem, where policy (political direction), operations (military requirements) and technology (research and development) meet, is the backbone of Japan-UK defence cooperation. The 2016 Japan-UK Foreign and Defence Ministerial Meeting ("2+2") confirmed that UK *Typhoons* would visit Japan, which allowed for the first joint military drill between the two nations. This, in turn, set in motion the military and industrial dimensions of the partnership. Military requirements were identified through the joint drill between the Royal Air Force and Japan Air Self-Defence Force (JASDF), which fed into concrete technology cooperation. Specifically, several R&D projects are currently ongoing including a Joint New Air-to-Air Missile (JNAAM), a universal radio-frequency sensor technology ("JAGUAR Project") and a future fighter jet engine demonstrator.

To a more modest degree, Japan and Italy are also building a defence-industrial partnership of their own. In addition to operating and producing F-35 variants, as well as both operating the KC-767 tanker, in 2020 Japan began sending JASDF pilots to Italy's International Flight Training School for advanced-level fighter training. The deepening of technology cooperation as the third element in the Japan-Italy partnership is only a matter of time, with major Italian defence companies such as Leonardo and Avio already onboard for the GCAP.

Japan is also boosting its wider defence-industrial partnerships. For example, it is a lesser known fact that Japan is now certified as a Tier 2 nation by the NATO Codification System (NCS), which aims to boost interoperability between partners and NATO nations. As a non-NATO member, it took Japan more than nine years to progress from a Tier 1 to Tier 2 nation, but now it can benefit from closer cooperation through the NCS including a two-way data exchange between NATO and certified nations, as well as participation in meetings on technical codification matters. Such initiatives are bringing Japan and NATO closer together on defence-industrial matters.

The geopolitical evolution of Japan's defence industry

The GCAP will have economic as well as defence-industrial benefits. Indeed, the joint leaders' statement remarks that 'the programme will deliver wider economic and industrial benefits, supporting jobs and livelihoods across Japan, Italy and the UK'. This is nothing new for Japan, as 2013-2014 saw the publication of a raft of strategy documents – including the defence White Paper, the first-ever National Security Strategy and the updated "Three Principles" document for defence equipment and technology transfers – that underlined the need to strengthen Japan's defence-industrial base. Essentially nothing significant has changed since this time. In comparison, the most recent release of Japan's three strategic documents – the National Security Strategy, the National Defense Strategy, and the National Defense Build-up Program in December 2022 – occurs at a time when Tokyo is in the midst of implementing its economic security policy.

Japan's overall economic security policy continues to be developed, especially against the background of supply chain disruptions and intense advanced technological competition. Not only did Japan add an economic division to its National Security Secretariat in April 2020, but on 11 May 2022 the Diet approved an Act on the promotion of national security through integrated economic measures. The Act will help Japan ensure a stable supply of critical materials, the protection of critical infrastructure, the development of critical technologies and creation of a secret patent system.

Japan faces both a formidable challenge and a grand opportunity to make its manufacturing industrial base competitive and attractive, which is indispensable for building up a strong defence-industrial base not only within Japan but also for the wider Indo-Pacific region.

Japan faces both a formidable challenge and a grand opportunity to make its manufacturing industrial base competitive and attractive.

Yet Japan has to be realistic as it does not have a national defence industry comparable to the US or Europe. Japan does not, for example, have dedicated associations for its national defence industry that can help promote firms or strike up international collaboration. The Japanese companies that manufacture parts for the F-35 programme are commercial companies, and these firms' revenues mainly come from commercial products rather than the defence sector. On average, the share of defence-related sales of all company sales in Japan is about 4%. For these companies, defence-related business is not driven by profitability but by a sense of social duty – defence remains almost an afterthought for Japanese commercial operators.

What is more, in Japan commercial companies do not just manufacture equipment but also provide logistics and maintenance service to the Japan Self-Defense Forces (JSDF). In other words, Japanese manufacturers are an integral part of Japan's national security apparatus. As the 2022 National Defence Strategy clearly states, 'Japan's defence industry is important [and] considered as a partner responsible for national defense along with' the Ministry of Defence and JSDF. Japan's defence-industrial base, headed by prime contractors such as Mitsubishi Electric, Mitsubishi Heavy Industries, IHI and others, includes thousands of mainly small and medium companies. To produce a F-2 aircraft, for example, about 1,100 domestic companies make up the supply chain and to produce a destroyer the supply chain covers about 8,300 Japanese companies.

Most crucially, those companies that operate in essential infrastructure and advanced technology are now required to consider economic statecraft above market efficiencies and profitability. Against the backdrop of China's Military-Civil Fusion Strategy, which seeks to develop and acquire advanced dual-use technology for military purposes in order to strengthen all of the instruments of China's national power, hitherto exclusively profit-driven Japanese companies now have to consider the national security implications for Japan.

As Japan seeks to develop a trusted industrial base, it can actually learn from China's approach to simultaneously developing its military-civil-commercial domains. Unlike China, however, Japan has a unique role as the most trusted major power among Southeast Asian elites, even far outweighing the EU and the US. Japan's objective is therefore to build an even more credible manufacturing industrial base in the region, and Tokyo's recent Economic Security Promotion Act is significant in this endeavour. Indeed, the Act specifically seeks to diversify Japan's supply chains and this implies that Japanese firms and partners can collectively manage economic security risks while also developing secure economic relationships across the Indo-Pacific region.

Yet Japan's economic security also entails some degree of re-shoring, and efforts to bring back home certain coveted industries are already underway. Three factors are driving Tokyo's strategy:

- First, the COVID-19 pandemic was a stark reminder that trade dependence on China for essential medical products could cause a national security crisis. Of course, Japan's Ministry of Economy, Trade and Investment (METI) had already been leading efforts to reduce the dependence on China, especially since the rare earth minerals trade embargo imposed by China on Japan in the aftermath of the 2010 Senkaku crisis. The pandemic further endorsed the rationale for supply chain diversification and re-shoring;

• Second, US-China competition in advanced technologies means that Japan is assessing its access to critical supplies. In this regard, in June 2021 METI published "The Strategy for Semiconductors and the Digital Industry", which firmly categorises semiconductors, cloud computing, data centres, 5G and more as a key part of Japan's overall national security;

• Third, a weaker yen is leading Japanese companies to reassess their overseas operations and to consider increasing production at home. Japan is once again an attractive market for investment.

The challenges facing Japan's defence industry

Despite the substantial shifts in Japan's defence industry and economic security strategy, the country faces a number of challenges. First, Japan's academic community is still reluctant to engage in the defence sector. Dating back to the 1950s, the Science Council of Japan (SCJ) has long rejected scientific research for "war purposes". A change of heart is finally taking place within the SCJ, which recently admitted that it is no longer possible to draw a line between civilian and military use of dual-use technologies. The bottom line is that Japan's academic community must become the fourth element of the defence ecosystem.

The second weakness is Japan's bureaucracy, which is notoriously known for its siloed institutional architecture. While the METI was in the driver's seat under the Abe Cabinet, the Ministry of Finance is eyeing greater influence under the current Kishida Cabinet. Luckily, the latest push to place economic security at the heart of Japan's national security policy is driven by politicians and not by the bureaucracy.

The third weakness is Japan's lack of experience in multinational cooperation in all three areas of the defence industry (production and procurement, R&D and exports). After all, Japan remains isolated from international defence markets. Finally, despite the government's effort in incentivising re-shoring, many Japanese firms still remain integrated in the Chinese market. While the most recent Nikkei polls show that more than 50% of major Japanese firms based in China are looking for alternative suppliers, the same poll – as well as the 2022 Japan External Trade Organization (JETRO) survey – show that more than 30% of Japanese firms want to expand operations in China.

A "European turn" in Japan's defence policy?

Japan and the US remain close partners, even though Japan chose the UK and Italy over the US for the GCAP. Despite opting for European partners for the next generation fighter aircraft, the Japan-US joint statement which preceded the GCAP announcement states that the two nations are discussing ways to cooperate on autonomous systems and capabilities. Japan-US defence-industrial cooperation is still strong then, despite the GCAP agreement.

What is more, the US, Australia, Japan and the UK are exploring the co-development of an unmanned Collaborative Combat Aircraft which would include drones, next-generation weapons and mission systems. When we place this in the context of the recent Australia-UK-US trilateral security arrangement (AUKUS), deeper integration of defence-related science, technology, industrial bases and supply chains between these partners means that Japan is already a de facto part of AUKUS.

To conclude, new capability programmes means that this is a prime moment for closer Japan-Europe cooperation, but existing frameworks must be more fully utilised too. For example, many companies are already part of the EU-Japan Business Roundtable and the NATO Industrial Advisory Group. New frameworks for R&D cooperation could be built too, for example, by linking the European Defence Fund and Japan's Key and Advanced Technology R&D through Cross Community Collaboration Program ("K Program"). Such initiatives and frameworks can help develop cooperation in AI, robotics and cybersecurity. Above all, more defence cooperation between the armed forces of Europe and Japan must be sought in order to identify common military requirements and to create a defence ecosystem where policy, operational needs and technology meet.

ABOUT THE AUTHOR
Nanae Baldauff

Nanae Baldauff is an Associate Research Fellow at UNU-CRIS, Bruges, Belgium and Senior Researcher at Keio Research Institute at SFC, Shonandai, Japan. She recently completed a Ph.D. in Political Science at Ghent University, Belgium, and holds a master's degree in European Governance, University of Luxembourg. She has a certificate of International Law from the Beasley School of Law, Temple University, Japan Campus. Her Ph.D. focused on Japan's defence cooperation with strategic partners from the perspective of Japan's national security objectives. The research examined the purposes of Japan's defence engagement in the areas of defence equipment and technology cooperation, military exercises and capacity building. She is a recipient of the Japan Foundation fellowship. She has been a guest lecturer at the University of Luxembourg, Trier University, Germany, and Ghent University. She serves as Non-Executive Director for the Advisory Board of International Security Industry Council of Japan.

@NanaeBaldauff

The **Centre for Security, Diplomacy and Strategy (CSDS)** seeks to contribute to a better understanding of the key contemporary security and diplomatic challenges of the 21st century – and their impact on Europe – while reaching out to the policy community that will ultimately need to handle such challenges. Our expertise in security studies will seek to establish comprehensive theoretical and policy coverage of strategic competition and its impact on Europe, whilst paying particular attention to the Transatlantic relationship and the wider Indo-Pacific region. Diplomacy as a field of study will be treated broadly and comparatively to encompass traditional statecraft and foreign policy analysis, as well as public, economic and cultural diplomacy.

The **CSDS Policy Brief** offers a peer-reviewed, interdisciplinary platform for critical analysis, information and interaction. In providing concise and to the point information, it serves as a reference point for policy makers in discussing geo-political, geo-economic and security issues of relevance for Europe. Subscribe here. The CSDS Policy Brief is a discussion forum; authors express their own views. If you consider contributing, contact the editor Dr. Daniel Fiott: daniel.fiott@vub.be

Follow us at:
Twitter @CSDS_Brussels LinkedIn CSDS Brussels Youtube CSDS
https://csds.vub.be

BRUSSELS SCHOOL OF GOVERNANCE

The Brussels School of Governance is an alliance between the Institute for European Studies (Vrije Universiteit Brussel) and Vesalius College.

Visitor's address:
Pleinlaan 5, 1050 Brussels, Belgium
Mailing address:
Pleinlaan 2, 1050 Brussels, Belgium

info_bsog@vub.be

www.brussels-school.be