FROM THE EDITOR

The government of Japan is planning to release a new National Security Strategy (NSS), as well as release updates to the National Defense Program Guidelines (NDPG) and Medium-Term Defense Program (MTDP) by the end of this year. The process of updating these strategic documents naturally invites a lively policy debate regarding defense procurement and the most timely and efficient way for Japan to acquire advanced capabilities.

In the 26th issue of the Debating Japan newsletter series, the CSIS Japan Chair invited Chuck Jones, former chief executive for Lockheed Martin Japan, and Masashi Murano, Japan Chair fellow at the Hudson Institute, to analyze Japan’s defense industry and the prospects for increasing indigenous defense production.
After World War II, Japan’s defense industry was revitalized through licensed production, which introduced advanced foreign defense technologies for Japan to manufacture domestically. Including licensed production, almost 90 percent of the Self-Defense Forces (SDF) equipment was indigenously produced until recently.

However, today, the benefits once achieved through licensed production are no longer available. This is because as defense systems have become more technologically sophisticated and more costly, international joint development and production have become the trend, and license-holding countries have been more reticent to release the license of defense equipment containing sensitive and critical technologies.

This trend has led to an increase in imports by foreign military sales (FMS) from the United States. Through FMS procurement, countries can acquire the latest high-performance systems operated by U.S. forces, as well as ensure and enhance interoperability. However, as there is limited room for FMS customers to get involved in the program and configuration management of their suppliers (i.e., the United States), the costs tend to increase, and delivery dates tend to be delayed. In the last 10 years, the amount of FMS has increased nearly tenfold in Japan, and it has come to account for nearly 20 to 30 percent of Japan’s procurement costs.

Since 2012, Japan’s defense budget has been increasing, but the growth rate has been gradual, around 1 percent compared to the previous year, which is not a significant increase. With a limited defense budget, an increase in the percentage of equipment imports will mean a decrease in profits for the Japanese defense industry. This is a matter of life and death for the Japanese defense industry, which relies almost entirely on the Ministry of Defense (MOD) and SDF for its demand, and in fact, an increasing number of small and medium-sized businesses are withdrawing from the defense business.

In addition, as with licensed production, it is either not allowed or very time-consuming for customers to add new capabilities or make upgrades to black-boxed defense systems acquired through FMS to fit their own operational requirements. The service life of major systems such as fifth- and sixth-generation fighters exceeds 30 years, and it is becoming increasingly difficult to accurately predict the technological and operational trends that will emerge in the security environment during that time. Therefore, major defense equipment must not be a single completed platform but must be adaptable and expandable as a system of systems that can evolve flexibly with changes in the operational environment.

The increasing trend in FMS procurement suggests that Japan’s domestic defense industry has not been able to provide critical capabilities needed by the MOD and SDF. This is unavoidable to some extent. However, procurement through FMS is essentially like a booster shot that temporarily strengthens and complements Japan’s defense capabilities. If Japan continues to overdose on them,
it will put pressure on the defense budget, erode Japan’s defense industrial technology base, and eventually cause Japan to lose its value as a healthy ally capable of producing its own antibodies.

In 2017, the guided-missile destroyer USS *John S. McCain*, damaged in a tragic collision, was quickly and cost-effectively repaired by local Japanese contractor Sumitomo Heavy Industries at Yokosuka and was able to return to service. If Japan’s defense industry shrinks further, its resilient logistics support capability, showcased in the above example, and its capacity will decline even in peacetime, slowing down the operational tempo of both the U.S. and Japanese forces. This is even more critical for the operational sustainability of air defense forces in wartime, in which there is a faster tempo.

Defense acquisition and defense industrial policy must be integrated and sustainable, as they are directly related to the operational infrastructure. Of course, if Japan insists too much on indigenous production and develops significantly less cost-effective equipment that does not satisfy the required capabilities, it will strangle itself. Moreover, it is impossible to maintain all domestic sectors; if Japan does not make its decisions by itself, the market for domestic industries will continue to shrink, and its extinction will only be a matter of time.

To avoid this, Japan needs to make hard choices and engage in bolder efforts. First, to ensure the survival of critical small and medium-sized businesses that are highly dependent on defense businesses, it is necessary to promote the integration and restructuring of these businesses. This could be done through horizontal integration between subcontractors or through vertical integration of subcontractors by prime companies.

Second, Japan and the United States need to quickly identify capabilities that both countries do not currently have, but which they both need, so that they can develop and deploy them in a short period of time. The best example is intermediate-range ballistic missiles (IRBM). The long-range hypersonic weapon (LRHW) being developed by the United States has a range of only about 2,800 km, and its potential deployment locations will be limited to the western part of Japan. However, an IRBM with a range of 4,000 km would be able to be deployed in Guam and in training fields in Hokkaido for long-range sniping of People’s Liberation Army (PLA) Air Force bases. With a range of 5,000 km, it could be deployed in northern Australia or Diego Garcia. Using Japan’s superior solid rocket motor manufacturing technology, Japan should take the lead in jointly developing such an IRBM with the United States and aim to deploy it within five years. The development of new space-based sensors and interceptors for hypersonic glide defense also needs to be accelerated.

Third, considering the growing importance of dual-use technologies, as well as spin-off technologies from commercial sectors, Japan should redefine the areas to be addressed in defense cooperation to include not only traditional defense industries but also technologies and industries that contribute to security more broadly, such as artificial intelligence, robotics, machine learning, and directed energy and quantum computing. This will allow Japan to discover the potential strengths of its domestic industries. In fact, as stated at the U.S.-Japan 2+2 meeting in January 2022, joint investment in these areas will be the first step in rapidly developing innovation and technology infrastructure in both countries.
The desire by governments to subsidize the indigenous development and production of defense articles is understandable. Ideally, it puts taxpayer money back into the national economy while supporting a highly skilled and generally well-paid work force. Then there is the matter of national pride. No country wants to rely on another country for its national security. However, the real question, particularly when a country faces a serious security environment such as Japan faces today, is whether a greater focus on indigenization of its national defense will effectively promote national security. While Japan could tolerate a degree of indigenization in a less challenging world, that is clearly no longer the case, and where Japanese leaders choose to invest scarce security funds will have long-term impacts on the country's future. Japanese leaders owe the people of Japan the best possible national defense. That does not completely exclude indigenous development and production, but it does put premium on its effectiveness. Is it really the best option for Japan in specific cases?

It is important to be clear that there are no absolutes on this issue. There are clearly areas where Japan brings strengths that allow indigenous production, such as ship building, where it can ride the coattails of a strong commercial industry, or display systems, where it brings unique civilian technology with a potential military application. This is, instead, a question of degree.

There are two key areas that handicap a Japanese focus on indigenous development and production, making it a suboptimal option for Japan's national security: the inability to achieve effective economies of scale and the lack of a robust defense research and development (R&D) infrastructure. In contrast, the potential benefits to Japan of a focus on indigenous development and production are dubious at best.

The Japanese government generally does not purchase enough major defense articles to provide a base for Japanese defense companies to achieve effective economies of scale. For example, the current plan is for Japan’s still-to-be-developed F-X fighter aircraft to replace its existing F-2 fleet, comprised of 94 aircraft with 4 prototypes. By contrast, the planned domestic buy of F-35s in the United States is 2,456 aircraft, not including sales to F-35 partners and other international customers. As a result, U.S. companies can invest in large-scale manufacturing facilities that leverage economies of scale and reduce unit costs. Because of the smaller numbers, Japanese companies have no incentive to invest in large-scale manufacturing facilities for defense articles.

Other countries with a small domestic defense market supplement it by selling articles internationally. Even the United States, with its large domestic market, sees international sales as a way to build alliances and partnerships while amortizing the cost of major end items. Even after the modification of the Three Principles on Defense Equipment Transfers in 2014, Japan has found the international market for defense sales to be a tough slog, notably with its effort to sell submarines to Australia in 2016. The Japanese government lacks an effective regulatory structure that would give Japanese companies some level of certainty to invest in building end items for an international market.
customer. Additionally, Japanese companies have shown little interest in growing their defense business beyond the domestic market.

Moreover, there are no "pure" defense companies in Japan. Mitsubishi Heavy Industries (MHI) is the largest defense company in Japan, and defense comprised 12 percent of its overall business in 2021. While that is not an insignificant amount, defense is clearly not at the core of MHI’s business. Defense is also, rightly, viewed as a low-margin business by companies with more profitable commercials sectors. With a single domestic market and little realistic prospect to move into foreign markets, Japanese companies have minimal incentive to invest in new production. Indeed, many are reassessing whether to stay in the business at all. Komatsu, once the seventh-largest defense company in Japan, has elected to move out of that business almost entirely. There is commensurate reduction in smaller companies and suppliers.

Lastly, Japan has underfunded defense R&D for some time. Defense R&D accounts for about 3 percent of Japanese government overall R&D funding, compared to 16 percent in South Korea and 11 percent in the United Kingdom. That being said, Japan has begun to recognize this serious deficiency, and its most recent defense budget seeks to address it. The most recent defense budget proposes a significant increase in financial and personnel resources for R&D. Perhaps the most hopeful note is the initiation of a new U.S.-Japan R&D agreement in January to enhance cooperation on R&D between the two countries.
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MASASHI MURANO is a Japan Chair fellow at Hudson Institute. Prior to joining Hudson, he was a research fellow at the Okazaki Institute, a Tokyo-based think tank. He has more than ten years of experience in research, analysis, tabletop exercises and facilitation of numerous classified products related to strategic intelligence assessment and policy planning for the Japanese government.


CHARLES (CHUCK) JONES retired from Lockheed Martin on 1 October 2021. Chuck previously served as chief executive for Lockheed Martin Japan from August 2014 until September 2021. He took the additional duty as regional executive for North Asia in April 2018. Chuck was responsible for all corporate marketing and Lockheed Martin business activities in Japan and the Republic of Korea (ROK).

Chuck joined Lockheed Martin in June 2005. As director for corporate international business development for Asia Pacific, he was deeply involved in a number of major campaigns, notably the sale of F-35s to both Japan and the ROK. Prior to joining Lockheed Martin, Chuck served as the deputy director of the Pentagon’s Tsunami Relief Task Force. From January 2004 to January 2005, he served as the director for Asia on the National Security Council with responsibility for Japan, Australia, New Zealand, North Korea, and the ROK. Chuck, a career Department of Defense (DoD) civil servant, came to the National Security Council from the Office of the Secretary of Defense where he was the country director for Korea, responsible for the realignment of U.S. Forces in the ROK. Prior to that assignment, Chuck was the senior policy and plans analyst for Northeast Asia in the Defense Prisoner of War/Missing Personnel Office (DPMO), where he participated in negotiations for access by U.S. teams looking for the remains of American military personnel in North Korea.

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