

Taiwan Marching on the Path to a Self-Reliant National Defense
- Creating Opportunities for US-Taiwan Defense Industry Cooperation

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Good morning, AIT Chairman Moriarty, all the friends and distinguished delegates from the United States and Taiwan, ladies and gentlemen,

一、前言

(First, let me thank Chairman Moriarty for the kind introduction.)

In May this year, I assumed the duty of vice minister of national defense. Before that, I had been with the NCSIST and working on defense technology R&D for 36 years in a row, which convinced me that I would retire from the NCSIST. Those years of experience gives me a clear view on the many challenges of Taiwan's defense industry, but I am also full of expectations. Actually, it has never crossed my mind that I would take on a different role to be the vice defense minister in charge of armament affairs. This, for me, is a challenge and also an opportunity.

The US-Taiwan Business Council has been devoted to promoting interaction and cooperation among US and Taiwan

defense industries. The contribution of the UTBC to our bilateral relations is deeply appreciated and valued by Taiwan. I am glad to have this opportunity to discuss with you the framework of Taiwan's policy of building a self-reliant national defense and how we intend to work with the US under this framework.

Last year, our government laid out new thinking on defense policies and confirmed that the fundamental approach to the realization of a self-reliant national defense is reinvigorating Taiwan's defense industry and expanding cooperation with international partners. The most important platform to foster such international partnership is right here—the US-Taiwan Defense Industry Conference organized by the UTBC. This year, we are seeing enthusiastic participation of over 35 Taiwan companies. With their support to government policies, I feel honored to represent the Ministry of National Defense to speak to you.

Last month, prestigious companies from Taiwan's aerospace, shipbuilding and information security sectors established the Taiwan Defense Industry Development Association. The Association will become a helping hand for the implementation of the government's policy of being self-reliant on national defense. It will also be a facilitator for US-Taiwan defense industry

cooperation. Members from the Association are here for the conference and for signing with the UTBC an agreement to jointly promote our industrial cooperation. We are encouraged by this development, which I see as an important milestone, and expect that the effort of the Association and the UTBC will further consolidate our defense industry cooperation.

二、國防變革:國防自主之路

■ 政策思維:落實自我防衛決心

Since over half a century, the United States is the most important ally to Taiwan. There has been tremendous support to help Taiwan build up our defense capabilities. In the tumultuous time of the 1950s, the US provided Taiwan with the most advanced weapons at the time, including the F-86, 100, 104 fighters and Sidewinder and Nike air defense missiles. Those timely provisions enhanced Taiwan's defense. Quantitatively, Taiwan's armament was no match for that of mainland China. Nevertheless, with the assistance from the US, we enjoyed a qualitative edge over our adversary and were therefore able to maintain the security of Taiwan.

However, Chinese military power, since then, has been

expanding and eroding Taiwan's qualitative edge. The gap is widening between the military powers across the Taiwan Strait. We have been in ever-urgent need of advanced weapons, but foreign acquisitions are becoming ever more difficult for Taiwan due to the obstruction of mainland China in the international community. Such reality compelled Taiwan to deliberate upon the task of being self-reliant.

Fortunately, in the past decades, Taiwan's devotion in technological development brought about internationally competitive capabilities in the semi-conductor, precision machining, and chemical industry, etc. With this technology base, our government is confident and resolved to take on the challenges of meeting our defense needs by indigenously developing weapons and systems for the unique battlespace across the Taiwan Strait. There may be existing products in the market that fit our needs, but not accessible to us. There are also special requirements that cannot be met by commercial off-the-shelf products. Both conditions necessitate indigenous development.

■ 為了國家安全，也為臺灣的產業發展創造機會

A self-reliant national defense is indicative of a nation's comprehensive national power. The primary objective of expanding defense industry capacity is to meet national security requirements and, secondarily, to link defense buildup to economic development, so that when we are spending on national defense, we are also investing on our national power. Defense needs will be supporting industrial development and economic growth. A stronger economy will then expand the pool of defense resources. This will create a virtuous cycle for the growth of comprehensive national power.

■ 信心與挑戰

Taiwan's indigenously developed anti-air and anti-ship missiles, aircraft, and naval vessels have been playing indispensable roles for maintaining peace and security across the Strait. I have personally involved in most of those indigenous programs and therefore have high confidence for our defense industry's competence in developing weapons and equipment to meet our future needs. I am, however, equally aware of the challenges that we must overcome.

First, Taiwan is resolved in developing warplanes and warships indigenously, but our experience is limited and we are not in possession of certain critical components yet. In order to minimize technological risks and accelerate system development, we will invite foreign companies to join us. This is the time for international primary systems providers and sub-providers of parts and components to be onboard with us. Given the longstanding US-Taiwan cooperation, US contractors, if you are willing to participate, will be our priority choice for partners.

If you look at the situation in past decades, you would find that when Taiwan put out a request of advanced weapons on the international market based on our actual defense needs, it often turned out to be a futile request. When we turned to ourselves and created indigenous programs, we would face export control schemes that prevented Taiwan from acquiring critical components and resulted in setbacks and delays of those programs. Nevertheless, we always rise up to the occasion and complete the tasks we set out to do. At last year's conference, when I led the NCSIST delegation, I reasoned that, for countries with determination and capabilities, the scheme of export control

is only creating an environment for them to be independent and self-reliant. A win-win situation can only be possible when countries that are willing to assist Taiwan can seize market opportunities and strengthen reciprocal technological cooperation with Taiwan.

I have worked hard in in the field of R&D for years. I know how much struggle you have to go through to develop new technologies and I know the mindset of the proprietors. We always honor the protective regulations for the Intellectual property rights. When I said reciprocal technological cooperation, I meant two-way effort that combines the technology know-how of both sides by providing critical components to each other and jointly developing defense systems that meet our respective requirements. Taking semi-conductor as an example, there are many OEMs in Taiwan supporting American brands. Taiwan's semi-conductor chip production volume will soon account for over 20% of the world's total, expecting to surpass that of mainland China and Japan by 2018 and become the world's largest semi-conductor center. The advanced air defense radar system now are mostly active phase array radar with transmit/receive

modules from semi-conductor production process. In fact, Taiwan is already capable of producing the modules of the same specifications and we do have our own active phase array radar. Many countries do have a concern that the supply chain for their weapons systems' critical components will be controlled by countries that are potentially adversarial, such as mainland China. Under such circumstances, Taiwan is a very good alternative option for the US.

■ 國防產業發展策略:振興國防三大產業

Our defense industry development strategies are at this stage focused on aerospace, shipbuilding and information security. There are already industry clusters in place: the aerospace in Taichung, shipbuilding in Kaohsiung and information security in Taipei. The task at hand is to make up for the insufficiencies in the production capacity and technologies by increasing foreign acquisitions of critical components and systems and riding on the momentum of the self-reliant policies to reinforce the technology base and create more opportunities for international partnership.

There is a new wave of opportunities for US-Taiwan cooperation

that could benefit both of us.

In the area of aerospace industry, we have begun the indigenous development of an advanced trainer jet. We hope to procure high-value system modules and components from the US. Most recently, Taiwan's AIDC has signed procurement contracts with Honeywell, BAE, L3, etc. to acquire engines and other systems. This is a fine example of cooperation and there will be more to come. Although the scale of our aerospace industry has been relatively limited, the foundation is pretty solid. We had worked with the US in the production of the IDFs. We have been indigenously producing UAVs and missiles systems for decades. Currently, prompted by our defense needs, we are planning to boost production capacity and would sincerely welcome international partners to join the supply chain of critical components. This is an immediate demand for the market.

On the other hand, Taiwan is a provider for the international market. The AIDC and many Taiwan companies, which are represented here today, have worked with US industries for many years. For space systems, the Alpha Magnetic Spectrometer, which

is a state-of-the-art cosmic ray particle detector, includes an electronic control system developed by the NCSIST. It has been operating outside of the International Space Station for over 6 years. Also, onboard the International Space Station, a NCSIST space computer started operating in May this year. This computer, I should add, has a very competitive price tag. So, Taiwan is well-positioned to wield the existing capabilities. The advanced trainer jet program will be a locomotive, leading the way to more programs that meet our unique needs and develop our aerospace industry.

In terms of shipbuilding industry, Taiwan already has an impressive capacity. We have extended experience of building cargo ships over 100 thousand tons. Our lighter vessels, primarily the yachts, also have a wide international clientele. The existing shipbuilding foundation and the weapons integration capability of the NCSIST will both be supporting our indigenous warship programs. We are beginning to design the next generation warships. The programs for the submarine design, the LPD, and the volume production of Tuo-chiang corvettes have been activated one after the other. By completing a development

process from design, R&D to manufacturing, we hope to broaden our technology base for building high performance ships. Taiwan shipyards are already working with companies including the Lockheed Martin and Raytheon for the prospect of cooperation.

In the area of information technology and information security, the highly developed IT industry and extensive broadband coverage are rendering Taiwan one of the regions most frequented by hacker activities and computer virus infections, which prompted Taiwan to develop sophisticated information security measures. With these technologies and human talents in place, our government is devoted to the development of information security industry. Our defense information network has also incorporated those technologies of information protection, cyberspace intelligence collection, and early warning to construct a multi-layered defense system. Taiwan's approach is to strengthen both the defense information security and economic development. Taiwan does have a huge market demand for information security. It is a great opportunity for US and Taiwan entrepreneurs, academicians, and researchers to increase cooperation and jointly build up stronger defensive measures

across the cyberspace.

■ 拓展臺美國防產業合作的具體執行方案

The on-going initiative of building a self-reliant national defense could create a momentum to bring about more US-Taiwan defense industry cooperation.

First, there is a set of clearly-defined strategic guidance—the Defense Industry Development Strategies. It provides a clear direction for defense industry development and will also help create an incubatory environment to attract defense contractors from around the world to help us enhance defensive capabilities.

Second, we are improving the overall environment to facilitate industrial development. The acquisition process will be revised. The economic and trade institution will continue to be reformed to match international standards. Laws and regulations will be more transparent. Also, the Defense Affairs Confidentiality Review Commission will regulate and assist local contractors to be compliant with security requirements and acquire internationally recognized security certificate, so that they could obtain the pass

into the international supply chain.

Third, we are trying to maintain steady market demands. In addition to the three core industries, we are reviewing other types of requirements. We will use system life cycle as the base for a sustainable management scheme of logistics and end-of-life replacement. Our government is encouraging the providers of peripheral equipment, such as mechanical, material and electric-related products, to devote themselves in the state-of-the-art technology development. The investment on national defense will thus bring about upgrades of technologies and competitiveness of high-tech industries.

三、美國為何需要協助臺灣推動國防自主

■ 協助臺灣推動國防自主符合美國利益

Taiwan always supports US initiatives of maintaining regional peace and stability. I believe, when the US takes a proactive approach to assist Taiwan to be self-reliant in safeguarding our national security, you are also reinforcing trusting relations with regional allies and friends and consolidating the common interests of all countries in the Asia-Pacific region.

■ 具體合作方式

The priority for the US to assist Taiwan includes issuing export licenses for critical components and supporting Taiwan's indigenous development of defensive weapons. In terms of technological cooperation, we should respect the IPR of both sides and jointly work on system development on an equal footing. Also, we hope to build depot level maintenance capabilities for the equipment acquired from the US, so that operational sustainability and survivability could be enhanced. Once Taiwan's maintenance supply chain for full life-cycle integrated logistic support is established, it will help the US military maintain the operational rate of their equipment operating in the region. The goal is for us to share our resources in a mutually beneficial way.

■ 安全管制機制建立

The protection of sensitive technologies has always been a top priority. To prevent critical technologies from being compromised, the Defense Affairs Confidentiality Review Commission is providing effective oversight over the personnel, information and facilities involved in confidential projects to

strengthen the control and protection of sensitive technologies. We have taken reference from the US to refine the current mechanism. On the protection of IPR, Taiwan has a solid legal basis and has also signed a memorandum on IPR law enforcement with the US in February this year to enhance our cooperation on IPR protection. All in all, we have been implementing up-to-date measures to protect critical technologies in our control.

■ 軍售仍是臺美關係的重要支柱

I wish to stress that US FMS to Taiwan continues to be a pillar of US-Taiwan defense relations. Besides requesting for cooperation of indigenous systems, President Tsai has iterated that we will continue to use the FMS channel to procure systems that Taiwan is currently unable of producing but necessary to our defense. Our FMS cooperation is also facilitating the growth of trade and jobs of the manufacturers' home states. The FMS cases of Patriot missiles, P-3Cs, Black Hawks, and Apaches, etc. are excellent examples of win-win cooperation. We are envisioning a prospect in which FMS and indigenous programs will be complementary to each other to strengthen our overall defense capabilities.

五、結語

As Taiwan marches on the path to a self-reliant national defense, there are bound to be challenges ahead of us. Yet, the growth of Taiwan has never been free of treacherous challenges. We know how to persist and survive. To build a self-reliant national defense, the cooperation between the government and the defense industry is critically important. Taiwan's government has the determination. Our defense industry has tremendous potential. However, whether the opportunities could be expanded to include cooperation with US defense industries is heavily dependent on the support of the US Government. Taiwan is an important security and strategic partner of the US. I urge the US Government to thoroughly review export control policies to Taiwan. This would accelerate Taiwan's defense buildup and increase opportunities of growth for the US defense industry to achieve a win-win situation.

I stand before you today advocating on behalf of the Ministry of National Defense of the Republic of China the policies to build a self-reliant national defense. I hope there will be greater

US-Taiwan collaborations that are less restrictive, more diversified and substantive. As we meet the needs of our national defense, we also intend to create the greatest benefits for both of our defense industries. Taiwan's government and industries are ready. Let me welcome US industries to be a part of this great cause of making peace and stability across the Taiwan Strait and the Asia-Pacific region.

Thank you for your kind attention!