

Business Models in Support of Taiwan Indigenous Defense Programs

By

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US-Taiwan Business Council

Defense Conference 2011

September 18-20, 2011

Jefferson Hotel

Richmond, Virginia

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INTRODUCTION:

The purpose of this paper is to discuss “the continuing development of Taiwan’s indigenous defense capabilities, and how U.S. industry can play a positive role in helping to expand and develop new and mutually beneficial business models,” including “cooperation opportunities in simulation/training, upgrades, license production, co-development, technical assistance/transfers, and Industrial Cooperation, as well as prospects for expanded use of the Direct Commercial Sales (DCS) model.”

This discussion takes place at a difficult time in U.S.-Taiwan defense relations. U.S.-China and Taiwan-China relations are improving. However, these improvements have resulted in a greater reluctance on the part of President Barack Obama’s administration to move forward on critical U.S. arms sales to Taiwan such as the sale of new F-16C/D fighters. Indeed, other than the January 2010, \$6.4 billion dollar arms sales notification package left over from the George W. Bush administration, President Barack Obama has sent no arms sales notification for Taiwan to the U.S. Congress during his time in office.

In such an environment, there are no doubt limits on what the U.S. government will allow when it comes to U.S. industry’s role in helping Taiwan expand and develop its domestic defense programs either through the use of Foreign Military Sales (FMS) or DCS sales. Nevertheless, I believe it is important that we explore the possibilities and encourage greater cooperation in this area. Whether Beijing would be any more tolerant of Taiwan domestic defense programs is debatable, but we should not allow Beijing’s attitude toward Taiwan’s domestic defense programs to deter us.

What is certain, however, is that the optimal conditions for improved industry-to-industry and government-to-government cooperation between the United States and Taiwan that fosters indigenous Taiwan defense programs cannot exist in an environment in which Beijing dictates the rules.

MUCH TO BUILD ON:

Taiwan has a long history of successful domestic defense programs. Taiwan once coproduced F-5 fighters and Huey Helicopters, developed and built the Indigenous Defensive Fighter (IDF), and built the PFG-II frigate. Today, it produces an array of surface-to-air, ship-to-ship, and other missiles. All these programs to one extent or another depended on U.S. assistance or technology transfer. Taiwan’s indigenous Tien-Kung missile program, for example, uses a version of Lockheed Martin’s ADAR radar.

Currently, the Chung Shan Institute of Science and Technology (CSIST) continues a variety of missile and other defense programs. The Aero Industry Development Corporation (AIDC) continues to pursue programs in the aerospace field. And CSBC Corp. is currently constructing 30 Kuang Hua VI fast-attack missile boats for the Taiwan navy, and next year it plans to build a 500-ton stealth corvette.

Current conditions may not be as conducive to large-scale ambitious government-run programs as they once were, but aspects of the IDF and PFG-II programs are still applicable to successful contemporary indigenous defense programs. Understanding these programs is essential.

Of course, the great difference in Taiwan's domestic defense programs before and after 1979 was the PRC reaction to U.S. arms sales to Taiwan and the August 17, 1982 Communiqué. From then until now there has been much controversy, inside and outside of the U.S. government, over what the United States should sell to Taiwan. The pre-1979 F-5 and Huey programs were based on practical and economic considerations. The post-1979 IDF and PFG-II programs were intended to provide Taiwan with as much capability as possible while attempting to minimize the PRC reaction, or at least the contemporary administration's fear of the PRC reaction.

In the late 1980s and early 1990s, during the Ronald Reagan and George H.W. Bush administrations, as is the case today, great efforts were made to avoid provoking the People's Republic of China. Nevertheless, arms sales to Taiwan continued at a robust pace as the U.S. also sold arms to China, giving it some incentive not to protest too loudly.

From 1984 to June 1989, the United States had four FMS arms sales programs with China. The Cold War had not yet ended and the U.S. forged a successful military relationship with the People's Liberation Army that included the sale of avionics systems for the F-8 fighter, Mark 46 torpedoes, four ANTPQ-37 Firefinder artillery-locating radars, and a 155 mm artillery fuse and detonator plant.

At that time, it was only a few years since the August 17, 1982 Communiqué on arms sales to Taiwan, and sensitivities ran high in the Department of State. Those of us in DoD responsible for arms sales to Taiwan worked hard to find creative ways to provide Taiwan the capabilities that it required and to support indigenous Taiwan defense companies and programs.

The first such creative program was the M-48H tank program. The M-48H was an M-60 tank chassis with an M-48A5 turret, gun and fire control system. The U.S. Army had a large number of excess M-60 chassis it had intended to use in the ill-fated division artillery gun program. Taiwan bought the chassis and turrets and shipped them to Taiwan where the tanks were assembled in Taichung at the Armor Research Center, the plant that had earlier done major

repairs on US armor damaged in Vietnam. It provided Taiwan with an M-60 capability without selling Taiwan M-60 tanks, which the Department of State opposed at the time. M-60s were approved at a later date.

This successful “creative” approach demonstrated what was possible when the U.S. and Taiwan thought out of the box; and it laid the groundwork for subsequent programs such as the IDF and PFG-II.

The IDF program was a reaction to the realization that the newer F-5s were inadequate to maintain a 400-combat-aircraft force as Taiwan’s aging Air Force of F-100s and F-104s reached the end of the service life. Unfortunately the Department of State held sway, continuing to oppose the sale of F-16A/Bs until President H.W. Bush overrode them in the 1992 presidential election campaign.

Concern about its future fighter aircraft capabilities led Taiwan to undertake an attempt to design a domestic fighter aircraft inspired by Israel’s Lavi fighter program. Initially the U.S. was skeptical of Taiwan’s ability to design and build an aircraft, even with substantial U.S. assistance. Following an assessment by a U.S. Air Force official who had worked on many U.S. aircraft development programs that Taiwan did indeed have a viable design, DoD supported and the State Department issued a license for General Dynamics, Fort Worth, to provide Taiwan with technical assistance to develop and manufacture that aircraft in Taiwan which came to be known as the Indigenous Defensive Fighter (IDF) or the Ching-Kuo Fighter named after President Chiang Ching-Kuo.

The Taiwan Navy faced a similar problem. Its aging World War II-era Gearing-Class destroyers were inadequate. Again, the Department of State, concerned about the possible PRC reaction to the sale of new or excess FFG-7s to Taiwan, initially opposed it. And, once again, a creative approach to a Taiwan domestic program came to the rescue permitting the China Shipbuilding Corporation (CSBC) to build FFG-7s at its facility in Kaohsiung, Taiwan.

Both the IDF and PFG-II programs involved FMS and DCS contracts, and both involved government-owned Taiwan industries. And they both involved close policy oversight and direction from the U.S. government.

The IDF program involved AIDC, a Taiwan government entity working with General Dynamic Fort Worth. Munitions licenses were issued for the sale of technical assistance, aircraft engines, and other components. A secure software development facility was constructed on CCK Air Base outside of Taichung, Taiwan, with a U.S.-only section to facilitate software source code development and testing.

The PFG-II program involved China Shipbuilding Corporation (CSBC) working with Fowler International, a company formed exclusively for the PFG-II program by a retired U.S. Navy admiral and former NAVSEA commander, and Bath Iron Works. Fowler International provided naval ship program management assistance to Taiwan. Bath Iron Works did the manufacturing design work in cooperation with CSBC. Numerous other smaller companies and suppliers were involved with both programs.

At their core, what made these programs successful was that they were U.S.-Taiwan, government-to-government as well as industry-to-industry cooperative programs from start to finish. The Department of Defense (DoD) and the Ministry of National Defense (MND) worked closely together to craft the structure and monitor the progress of these programs. For its part, DoD facilitated technology release approvals and worked closely with the U.S. defense industries involved. MND provided direction, oversight, and support to AIDC, CSBC, and CSIST.

CONTEMPORARY CIRCUMSTANCES:

The unique set of circumstances that permitted these programs to succeed has changed and I'm not sure if these large-scale programs were to be attempted today that they would or could be as successful as they were. That does not mean, however, that there aren't many aspects of these programs that remain applicable.

The status of both AIDC and CSBC, of course, has changed. AIDC Corp. was transferred from CSIST to a government owned company in July 1, 1996 and is subordinate to the Ministry of Economic Affairs. CSBC Corp. was transferred from government ownership to a private company on December 18, 2008. CSIST itself soon will be privatized.

Other problems resulting from socio-economic factors in Taiwan also complicate matters. Skilled engineers and innovators are drawn away from organizations like AIDC and CSBC Corporation by higher salaries in high-tech companies in China and other countries in Asia.

Legislative Yuan (LY) oversight of defense spending and acquisition decision-making was far less critical during the IDF and PFG-II years than it is now. Given the economic challenges Taiwan faces, the LY justifiably scrutinizes defense spending. It's more economical to buy 66 new F-16C/Ds or upgrade older excess F-16s from the United States than it would be to attempt to develop a domestic follow on the IDF program.

Furthermore, I fully expect that any creative programs the U.S. and Taiwan might attempt today may run into opposition in the LY. Many legislators in the past have been critical of previous

creative programs because they or their constituents believed these programs resulted in Taiwan purchasing inferior equipment from the United States.

U.S. government willingness to participate in creative approaches is also less evident. This isn't solely attributable to the Obama administration. Ever since the George W. Bush administration in 2001 declared that Taiwan would be treated like any other FMS customer and approved in principle more than \$30 billion in arms sales to Taiwan, the U.S. government has not employed creative approaches such as those used in the past.

An environment more conducive to successful indigenous Taiwan defense programs today, however, will not come about without the assistance of the Taiwan and U.S. governments. The President of Taiwan and the LY must develop policies and laws to support them, including policies that will attract and retain the highest quality designers, engineers and managers to organizations like CSIST. It must take steps and provide incentives to attract and retain the most skilled and innovative people.

For its part, the U.S. government has to do more than decide what it will and won't sell to Taiwan. It must foster cooperative programs between U.S. defense industry and the many high-tech and low-tech companies on Taiwan. It must seek creative approaches in order to provide Taiwan with many of the products and services it requires for aerospace, C4ISR, ships, combat vehicles and subsystem production. And it must work with Taiwan as it has in the past to coordinate U.S.-Taiwan efforts.

RECOMMENDATIONS:

I am not suggesting that either government should attempt to recreate an environment when fighter aircraft and major surface combatants can again be manufactured on Taiwan. They are complex and expensive programs that in this time of more austere defense budgets may not be cost effective.

The following are just a few recommendations on what both the U.S. and Taiwan can do to create a better environment for Taiwan domestic defense programs.

The much discussed, long awaited export licensing reforms promised by the current (and past) U.S. administrations would be of great value to the strategic interests of both nations while making a positive impact on the U.S. economy. They would make it easier for U.S. defense industry to move more quickly and with greater certainty in developing cooperative defense programs with Taiwan.

It is widely believed that the Obama administration will soon announce its decision to approve the refurbishment and upgrade of Taiwan's F-16A/Bs while continuing to disallow Taiwan to submit a Letter of Request (LOA) for new F-16C/Ds. Why not allow some of this work to take place at AIDC? Beyond that, the U.S. government could allow Taiwan to purchase additional excess older F-16s and upgrade them along with the others. This would both bolster Taiwan's domestic defense programs while allowing Taiwan to acquire the additional F-16s that it requires.

The U.S. should make the discussion of indigenous defense programs a major topic at all U.S.-Taiwan high-level defense talks—the Defense Review Talks, the Security Cooperation Talks and the Monterey Talks. The purpose of this discussion would be enable both governments to work more efficiently and effectively with its respective defense companies to foster cooperation as it did in the 1980s and early 1990s.

Regarding industrial cooperation within Taiwan, there already is an established infrastructure and funding. This includes the Industrial Development Bureau (IDB) and the "Committee for Aviation and Space Industry Development" (CASID) under the Ministry of Economics Affairs.

It is my understanding that there are unspent offset monies from previous FMS programs. These organizations and funds should be available to make some real improvement in indigenous aerospace industry. This infrastructure is much underutilized by industries from both side of the Pacific. There are very few companies in Taiwan who are tapped into the offset program except for a few large organizations such as AIDC or CSBC Corp.

The successful opportunities would require willing and profitable participation from many medium to small truly private companies. There are literally thousands of highly reputable smaller companies delivering the best products globally in their prospective industries. The cluster of 10~20 person machine shops making airplane components in Texas should be the model for Taiwan.

To advance in the new direction stated above, the ROC government should be focused on two areas: First it should create a structure that lowers the entry barrier to the aerospace and other industries for medium and small companies. For example, why not designate CASID to be a one-stop window for small firms that want to tap into the FMS off-set fund?

It is impractical to expect a small firm in Taiwan to negotiate with large U.S. companies on offset programs. CASID should act for Taiwan's aerospace industry as the U.S. Small Business Administration. It should provide all the regulatory assistance as well as anchoring negotiations

with major US firms. There is no reason why CASID itself cannot tap into the off-set fund to pay for this facilitation.

CASID (or some other government agency) should establish an in-country aerospace certification facility as soon as possible. One reason that a mom-and-pop machine shop, and there are many high-quality ones in Taiwan, cannot produce and sell machined parts to large U.S. defense firms is because their products cannot be aerospace-qualified. It is too high a hurdle for a small company in Taiwan to overcome.

That burden should be on the shoulder of the government. An example of how the ROC government could do this would be by establishing an aerospace certification/qualification business so it can take care of the rigorous bureaucratic process and create a profitable environment for small companies. Establishing an indigenous helicopter flight simulator certification capability in Taiwan is once such example.

To foster increased cooperation it also is necessary for Taiwan to relax the access requirements for MND/services & industry meetings.

Restrictions that create barriers between Taiwan's defense and non-defense industries should be reviewed to enable the more profitable non-defense sector to invest in and promote the development of Taiwan domestic defense programs.

Local and international industry also needs to understand the impact of the legislated CSIST privatization so industry understands how to approach a business relationship and/or competitive landscape.

Last, but certainly not least, Taiwan must ensure a secure environment for U.S. technology transfer. The more Taiwan-China relations improve and interaction between Taiwan and China increases, the more the U.S. government's concerns about technology transfer to Taiwan increases.

CONCLUSION:

The U.S. and Taiwan defense establishments have a long history of close cooperation beneficial to both sides. That cooperation remains essential to the national security interests of both Taiwan and the United States. Certainly the status quo continues to evolve in the triangle of U.S.-China-Taiwan relations, and China has become much more assertive in its opposition to U.S. arms sales to Taiwan. Nevertheless, decisions that dramatically reduce U.S. arms sales to Taiwan or that inhibit support for Taiwan's indigenous defense programs can not be easily undone if the détente which currently exists in the Taiwan Strait is undone. Supporting Taiwan's indigenous defense

industry and programs, through conventional as well as creative ways, can provide Taiwan the defense and deterrence capabilities it requires without doing irreparable damage to U.S.-China and U.S.-Taiwan relations.