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Taiwan's Indigenous Submarine: A Viable Project?

By Wu Shang-su

Synopsis

Taiwan's official proposal to develop an indigenous diesel-electric submarine (SSK) will face serious obstacles. It would not work, whether as a bargaining chip or a viable project.

Commentary

Taiwan's Deputy Defence Minister, Andrew Hsia, recently stated, in Washington, that Taiwan is "developing, or trying to develop" an indigenous submarine. According to previous official statements, Taiwan's indigenous SSKs would be of displacement of between 1500 and 2000 tonnes. It would strengthen its weak flotilla comprising two American Guppy II Class SSKs, antique of the Second World War, which are only for training and two Dutch Zwaardvis Class obtained in the mid-1980s, which are the only operational assets.

The Various Constraints

Generally, Taiwan meets several conditions for indigenously developing submarines, such as established industry of ship-building and defence, as well as financial affordability. Nevertheless, a range of technical and political factors obstruct its indigenous submarine project.

Nowadays, independent SSK design capability is still limited to a few traditional arms exporting countries, such as Germany and Russia. Without an industrial background and experience, Taiwan's purely independent design would be unrealistic or time consuming with "trial and error." If Taiwan attempts to obtain an authorised licence for a foreign design, China's comprehensive diplomatic and economic pressures would be exerted to block Taiwan's access to all countries with a submarine building industry.

Apart from technological issues, Taiwan's allocation of national resources is another challenge. In the 1980s, Taiwan indeed developed an indigenous defence fighter (IDF) and manufactured several sophisticated weapon systems with American technological assistance and authorisation. However, the defence budget then occupied more than 5.3% of Taiwan's GDP. Since the democratisation process in the early 1990s, the share of defence budget in the GDP has continuously dropped; it went below 3% in the mid-2000s and has remained there until today. Unless the decision makers in Taipei dramatically shift their priorities, the ministry of national defence (MND) would be unlikely to receive sufficient budget for such an expensive project.

Even if Taiwan can overcome the difficulties mentioned above, the long-term goal of forming a credible

submarine force would be time-consuming. For example, South Korea spent at least 14 years to establish its fleet of nine Chang Bogo class SSK, based on the German type 209 SSK. Whether the MND really adopts a purely indigenous design or gain foreign authorisation, a series of challenges including development, trial, adjustment and full production would take as much time or even longer.

A Bargaining Chip?

As developing an indigenous SSK would be difficult for Taiwan, another purpose of this project may be as a tactic in the negotiation of an arms deal with the US. Since 1950, the US has nearly monopolised the arms supply to Taiwan, and the latter sometimes uses alternatives to seek better offers. Concerning Taiwan's unilateral movements, whether "to retake the Mainland" or claiming de jure independence, which may disturb the situation in the Strait by provoking China, the US has controlled the former's military capability through conservatively providing major weapon systems, especially the ones with offensive potential. As a result, Taiwan has an obstacle to develop its own defence strategy due to inadequate arms supply and has been eager to obtain alternatives, from foreign or domestic sources.

Alternatives would not only provide Taipei with a defence capability to match its plan, but also persuade Washington to provide similar types of weapon systems in the arms deal. The US's decision to sell F-16 A/B fighters came after the 1992 deal of the French Mirage 2000-5 fighters. Taiwan's locally built mini submarines with Italian technological support in the late 1960s successfully led to the US offering two Guppy II Class SSKs in 1972, despite the fact that those mini submarines were not in service for long due to their limited performance. Extrapolating such cases, if Taiwan's indigenous submarine project can be achieved to a certain extent, the US would be more likely to provide a similar weapon system with equivalent or better performance.

The bargaining chip role of the indigenous submarine project would face two difficulties: unavailability and Taiwan's political position. Firstly, the American ship-building industry has not produced any SSK since the 1960s, and there is no American SSK design available for Taiwan. In the IDF project, the American aviation industry supplied Taiwan with radar, turbine jet engine and other critical parts, but such a pattern cannot be repeated owing to the unfamiliarity of the American maritime industry with SSKs. Introduction of a third party's technology could be a solution, but such special international arrangement would be vulnerable to China's pressure and take more time.

Secondly, after the Chinese Nationalist Party (Kuomintang, KMT) returned to power in 2008, it has given utmost attention to harmonising the relationship with China through economic integration measures under the Economic Cooperation Framework Agreement (ECFA) of 2010. Following this trend, a political settlement, such as the cross-Strait political agreement, has been publicly discussed and may be achieved in the near future. Although Washington openly supports Taiwan autonomy, it lacks legitimacy to intervene in the peaceful unification across the Strait. When Taiwan becomes eventually unified with China through such integration, supplying sophisticated weapon system would not be in the national interest of the US.

Dismal Future

As a fully indigenous development is unlikely and the US source would not be feasible, Taiwan's SSK project may be seen as a lonely struggle by the MND. Unless the final political settlement is achieved, the MND has to continuously plan Taiwan's defence strategy. As the shortcoming of a weak submarine capability has lasted for decades, it is understandable for the MND to pursue all possible avenues to access the SSKs, including the domestic one. Nevertheless, defence cannot be isolated from politics and Taiwan's political circumstance, both external and internal, probably would make the indigenous SSK project neither feasible nor a bargaining chip, but merely an empty wish.

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